The Forum

SEPTEMBER, 1898.

THE BALLOON IN WARFARE.

In September, 1896, a great meteorological conference was held in Paris, at which nearly every important station throughout the world was represented. One of the most important subjects discussed at this conference was the utility of the balloon for scientific purposes. A mode of equipment for aeronautic expeditions was established; and an international commission was appointed to organize experiments, upon methods previously agreed upon, and with the aid of scientific instruments accurately tested and compared.

The work of this commission has been greatly facilitated by the fact, that the interest in aeronautics has steadily increased during recent decades; this interest being due, in great part, to the exigencies of modern warfare. German military operations have necessitated the expenditure of a considerable sum of money; and a part of this has been devoted to aeronautic investigation. In this way the researches of students have received a powerful stimulus; and much valuable information, both as regards equipment and technic, has been obtained. Indeed the ascensions which have taken place at Berlin have been conducted under the auspices of the Emperor himself, with the active coöperation of the officers attached to the Engineer Corps (Aeronautic Division) of the German army. It was in this branch of the service that the writer received his practical training in aeronautical science.

In other European countries, also, scientific investigation in aeronautics has received great encouragement at the hands of the military authorities. In St. Petersburg the aeronaut Stark is in close communica-

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tion with the Central Observatory; in Vienna the Meteorological Institute is actively supported by the Imperial Ministry of War; and similar gratifying coöperation exists also in Paris, Rome, Strasburg, and several other cities. Indeed, as already intimated, the entire development of aeronautical science may be traced in great part to the demands of modern warfare. An article devoted to recent achievements in this domain must, therefore, of necessity, emphasize the military side of the question.

The first troop of military aeronauts in Europe was called into being toward the close of the last century, when the young French Republic, striving single-handed against the combined forces of all Europe, was compelled to tax its ingenuity to the utmost in order to cope successfully with its enemies.

In August, 1793, the chemist Guyton de Morveau succeeded in inducing the French Government to provide for a series of aeronautic experiments in order that balloons might be eventually utilized for military purposes. Owing to the success of these experiments, the National Convention of France, in October of the same year, organized a company of military aeronauts, with orders to report at once for active service to Gen. Jourdan of L'Armée du Nord. The promoter of these enterprises, De Morveau, was at first confronted by great obstacles. At that time it was almost impossible to procure sulphuric acid in France; consequently the hydrogen necessary to the inflation of the balloon had to be laboriously manufactured by passing steam over iron filings,—a method invented shortly before by Lavoisier. In order to generate a sufficient quantity of gas in this manner, it was necessary to build a large number of ovens in the open field,—a very laborious and costly proceeding;—and it was undoubtedly the great expense thus involved that, within a few years, arrested the development of the science. But the achievements of this first French troop of aerial navigators are memorable by reason of the great difficulties encountered.

The balloons of that period were made of oiled pongee silk, varnished, and woven so closely as to admit of a very high pressure of gas. At present, a captive balloon requires refilling after about eight days. At the time of which I write, however, balloons sometimes remained in use for months without requiring to be recharged.

As the balloon always remained inflated, its transportation was a matter of extreme difficulty. In this respect, the great achievements of Coutelle are worthy of notice, as the following instance will show: When Gen. Jourdan abandoned the siege of Maubeuge, and decided to invest

Charleroi, Coutelle, with an inflated balloon, marched thither, a distance of forty-five kilometres, at night, and in the face of the opposing army. This achievement aroused the admiration even of the enemy.

Owing to our meagre sources of information with regard to methods of warfare in the last century, we cannot form an idea of the military value of the balloon for purposes of reconnaissance. We know, however, that much valuable information regarding the operations of the opposing force was obtained by aeronauts at the capitulation of Charleroi, as well as at the battle of Fleurens, where a staff officer took observations from a balloon which remained aloft for several hours. Undoubtedly also this new method of reconnaissance did not fail of its moral effect upon the enemy.

On June 23, 1794, a new company of aeronauts was formed by the Government, and in October, 1795, the École nationale aerostatique was founded at Meudon. We possess but little information concerning the achievements of these two companies during the succeeding years. We know that the first company was attached to the army of the Sambre and the Meuse under Gen. Jourdan, and that it fell into the hands of the enemy at Würtzburg. The second company operated with the Army of the Rhine; and it was first employed at the siege of Mayence. It then accompanied Moreau across the Rhine, and proceeded with him as far as Donauwörth. Here the last ascension was made, as the materials for refilling the balloon could not be obtained in the enemy's country. When Napoleon planned his Egyptian campaign this troop of aeronauts, under the leadership of Coutelle, was reorganized. The troop could not operate, however, as the English had seized the transport-ship which was to convey the balloon-material to Egypt. In the following year both companies of aeronauts were disbanded, and the school at Meudon was closed. From this time until 1870 aerial navigation for military purposes was entirely suspended.

The revival of the science of aeronautics dates from the Franco-Prussian war. Paris, hemmed in on all sides, and cut off entirely from the outer world, sought to reëstablish communication with the provinces, and to this end was compelled to employ the balloon. Rampon, then Postmaster of Paris, organized a complete system of aerial communication; and no fewer than sixty-four balloons were despatched during the siege. These balloons carried in all one hundred and fifty-two passengers, more than four million letters, and several hundred portfolios. The voyage of Gambetta was a memorable one. Desirous of reaching the provinces in order that he might complete arrangements for the national

defence, yet unable to break through the ranks of the beleaguering army, he was at last compelled to make his escape from Paris in a balloon.

Some of the balloons sent out during the siege were lost in the ocean; others were captured by the enemy, who soon became expert in the art; and a few met with adventures of the most singular nature. Worthy of mention in the latter regard is the voyage of the aeronauts Rotier and Bezier, who ascended from Paris at 11 P.M. on November 24, 1870, and landed upon one of the frozen fjords of Norway at noon the next day. Caught in one of the violent autumnal storms, they were carried, in a single night, with terrific velocity, over France and the North Sea, to the shores of Scandinavia. All attempts to utilize for defensive purposes the balloons sent out from Paris failed, owing, not to a scarcity of men, —for aeronautic companies had been formed throughout the provinces,— but to a lack of material. Nor did the German detachment, organized during the war upon French models, operate effectively. After a few ascensions, it was disbanded before Paris in October, 1870.

A complete reorganization of the Aeronautic Department of France did not take place until 1879. This reorganization was due to the energy of Gambetta. The School at Meudon was reopened; and a series of appropriations was set apart for the purpose of forming a number of balloon-parks, each of which consisted of a windlass, with cable, a machine for generating hydrogen, and a baggage-wagon for the transportation of material. Before proceeding to discuss the further development of military aeronautics, it will be well to dwell briefly upon the contributions which England, since the Franco-Prussian war, has furnished to this department of science.

England has developed an independent school, based upon new principles, which has already been prolific of excellent results. As early as 1871 a commission was appointed to organize a Department of Military Aeronautics. This commission fitted up an arsenal at Woolwich, where the technic of balloon construction was brought to a high degree of perfection.

In England balloons are still made principally of gold-beaters' skin,— a material light, though expensive, and very difficult to manipulate. Of its advantages—or rather disadvantages—I shall speak later.

It is to the Arsenal at Woolwich that we are indebted for the introduction of cylindrical steel retorts for the storage of compressed gas; and the fact, that military aeronautics is a live science to-day, is due mainly to this new method of generating and transporting the hydrogen requisite for the inflation of balloons.

In discussing the first attempts of military aeronauts in France, I stated that the greatest obstacle to the military serviceability of the balloon lay in the clumsiness of the gas-generators, which had laboriously to be erected at the various camping-grounds, or transported from place to place by means of heavy wagons. England can claim the honor of being the first to supply an aeronautic troop operating in the field with a sufficient quantity of compressed gas stored in portable retorts. By reason of this innovation, the aeronautic troop, no longer hampered by *impedimenta*, can now operate with a celerity formerly impossible. As the equipment of an English aeronautic park has been adopted by most European countries, a brief description of it may not be uninteresting.

According to the specification for 1889, an English aeronautic park, when mobilized and fully equipped, should properly consist of: One balloon-wagon with hand-winch; 1 balloon made of gold-beaters' skin (size, 250 cubic metres); 1 steel cable, 760 metres; 1 supply-wagon; and 4 gas-wagons, each carrying 35 retorts containing 3.6 cubic metres of gas each. The contents of three wagons suffice fully to inflate the balloon within fifteen minutes. The hydrogen used is manufactured in Chatham, either in liquid form or by the above-mentioned method of passing steam over iron filings. The English have already utilized their parks in the Soudan and in India. Unfortunately, however, their excellent aeronautic material has not been always supported by effective training and proper organization.

It is astonishing that the English principle enunciated in the foregoing has not yet been introduced into France. So late as 1890 a French aeronautic park consisted of the following equipment; viz., One steam windlass, with 6 horses; one tender (2,250 kilogrammes), with 4 horses; 1 balloon-wagon (2,100 kilogrammes), 4 horses; 1 gas-holder (2,300 kilogrammes), 6 horses; 2 box-wagons containing chemicals, 10 horses; 2 provision-wagons, 4 horses; and 8 two-horse wagons for the transportation of chemicals. A French aeronautic train, therefore, when complete, consists of 16 heavy wagons, 50 draught-horses, and 6 riding-horses.

Capt. Moedebeck, the experienced German officer to whom I am indebted for the foregoing figures, points to the difficulty of moving a train so long and ponderous; and he adds the following criticism:

"France undoubtedly carried the technic of military aeronautics to a high degree of development. In consequence, however, of her failure to adopt the English invention of portable gas-retorts, her leadership in this department of science has now been lost to her."

Nor is the organization of the various divisions of the French Aero-

nautic Corps free from defects. Indeed, it is only since 1890 that officers have received a practical education in this important branch of the service.

I shall now give a description of the German system, which I shall treat more exhaustively for two reasons: (1) Owing to my closer acquaintance with the subject; and (2) because I believe that the German system is the most highly developed. It is scarcely necessary to add that my statements are based entirely upon facts long known in professional circles.

In Germany to-day there is a central troop, the Royal Prussian Aeronautic Division, garrisoned at Schoeneberg, near Berlin, and subject to the commands of the general staff. In the event of a general mobilization, and at every manœuvre, this central aeronautic division sends out detachments which are placed at the disposal of the commanders of the several army corps. The equipment of these detachments, though simple, is yet perfectly adapted to military service, and thus permits of very rapid evolutions in the field. As the English system of generating gas is employed, special wagons for this purpose, such as are used in France, are rendered unnecessary. Compressed gas is carried in wagons specially constructed for the purpose, and which are so mobile that they can at any time leave the main road and travel over rough ground. The gas is manufactured at central stations, and at once compressed into portable retorts. Formerly hydrogen was manufactured at Schoeneberg; both "wet" and "dry" methods being employed. Lately a new method has been discovered, by means of which a very pure, and consequently a very light, gas may be produced. It is a well-known fact that the purest hydrogen gas is obtained by means of the electrolytic system. For the rapid manufacture of gas in great quantity, however, this system is too costly; moreover, it requires an extensive plant. For these reasons it has been rejected by the German military authorities.

There are at present in Germany a number of chemical factories which employ the electrolytic system in the manufacture of such products as chlorine and potash,—products which throw off a considerable quantity of hydrogen. Formerly the hydrogen gas thus generated was considered worthless and was allowed to mingle with the air. Upon the request, however, of the military authorities, this gas is now saved. It is not only inexpensive, but—and this is of far greater importance—extremely pure.

As already stated, the hydrogen gas is stored in portable retorts; the pressure being the high one of 120 atmospheres. Formerly these

retorts, particularly when stored for some time, occasionally exploded; and this rendered their transportation by rail or road somewhat dangerous. Indeed, several accidents occurred both in England and in Germany; and in consequence the development of aeronautical science in this direction was to some extent retarded. But these accidents did not dismay German scientists, whose attention was now directed toward improving the material of the retort itself. And well their efforts have been repaid. The retorts manufactured to-day are of a standard of excellence exceeding all expectation.

The inflated balloon is held by steel cables in which strength and lightness are combined. Experiments with hempen ropes were also made; but these proved unsatisfactory, and were consequently abandoned. By means of the steel cable, the balloon is enabled to ascend to a great height. I have often taken observations from a captive balloon at a height of 800–1,000 metres. The cable is wound upon a windlass which is attached to a heavy wagon, and which can be operated by hand or steam power. The steam windlass, however, is rarely employed, as it cannot be used at a moment's notice; moreover, it is extremely heavy and, consequently, difficult to transport. As men are always plentiful, the hand-windlass for military operations is in every way preferable. By means of this windlass—when operated by fifty men—the balloon may be easily drawn down from a height of one thousand metres in ten to fifteen minutes.

We now come to the main feature of the aeronautic park,—the balloon itself. Formerly balloons were made almost exclusively of silk,—a material selected because of its lightness. The silk was rendered gas-tight by the application of several coatings of linseed-oil varnish, which was applied to both sides of the material, and, after penetrating every fibre, became perfectly dry. Owing, however, to the costliness of silk, it is now rarely, if ever, employed in Germany. Moreover, new processes of manufacturing gas-proof materials have been discovered. At present the material most extensively used for this purpose is rubber—a material scarcely heavier than silk, and greatly preferable to the latter by reason of its superior cleanliness. The rubber used in the manufacture of balloons is subjected to the following process: Pure caoutchouc is dissolved in benzine; the product being evenly distributed in thin layers upon the cloth, and then vulcanized. The cloth consists of double layers of cotton, which contain the vulcanized rubber in the form of an intermediate layer. Such balloon-cloth is strong and very durable, particularly when the double layers of cotton run diagonally to each other. Indeed, under

these conditions, a rent in the cloth is almost an impossibility. It can be readily understood how serviceable this material must be in the case of captive balloons exposed to a high pressure of wind.

In England—and in England only—balloons are still made of gold-beater's skin, a material prepared from the gut of calves or horses. It is composed of many pieces, and is remarkable for its lightness. A great many layers of this skin are required to give the balloon a sufficient power of resistance; and thus the advantage of lightness is counterbalanced by the great expenditure of time and labor involved.

Judging by my own experience, I should unhesitatingly declare in favor of vulcanized-rubber cloth for balloons subjected to hard usage. The material is powerfully resistant and easy to handle and to fold; and above all, it admits of repairs in the field. A rent or a hole may be patched in a very short time; and this, from a military point of view, must be considered a very great advantage.

The German army is the only one which has departed from the original globular form of the captive balloon. This departure may, perhaps, be regarded as the greatest improvement hitherto introduced in the department of military aeronautics. Notwithstanding the advantages accruing from improved material, superior technic, and facilities of transportation, the Aeronautic Troop has been, until very recently, dependent upon atmospheric conditions. A heavy fog was a calamity which at once interrupted all observations, and affected skirmishing parties of horse and foot, as well as the Aeronautic Troop itself. Wind and rain also acted as serious hindrances to aeronautic observations,—more particularly in the case of globular balloons,—inasmuch as they frequently rendered the ascension difficult, if not impossible. Only a very experienced aeronaut can remain in a balloon for hours when it is exposed to a wind-velocity of eleven miles an hour. As the pressure of the wind produces constant oscillations or pulsations, a balloon ascending during a very powerful gale performs the most extraordinary evolutions. Within a very short time the balloon-car swerves hundreds of metres from its altitude. At one time, the balloon almost touches the earth. At another, it rapidly ascends in a vertical direction; tugging at its cable, and straining the steel strands to their utmost tension. The undulations of a ship on a rough sea are a pleasant lullaby compared with the experiences of an aeronaut in a gale. Nevertheless, even under the most trying circumstances there have been officers willing to undertake an ascension; and their deeds bear witness to the almost unlimited powers of human

achievement. Unfortunately, the material of the balloon can offer but a fixed amount of resistance. With the velocity of the wind above seventeen miles an hour, the atmospheric pressure exerted upon the globular balloon becomes so great as to render its ascension an impossibility. The steel cable unwinds, it is true; but the balloon only sways from side to side, and does not rise. Such atmospheric conditions are frequent on the open sea in the vicinity of the coast, where the balloon is employed for taking marine observations; and whenever they occur, the ordinary aeronautic outfit is rendered useless.

The credit of inventing an air-ship capable of overcoming adverse atmospheric conditions belongs to two German officers,—Von Parseval, a Bavarian captain, and Lieut. Bartsch von Liegsfeld, of the Prussian aeronautic service. After repeated experiments and numerous modifications, these officers at last conjointly succeeded in constructing a balloon, designated as the "Drachenballon" (kite-balloon), which is capable of ascending during the heaviest gale, and which, indeed, receives an increased impetus according to the atmospheric pressure exerted upon it.

In this new invention, the qualities of the balloon and the kite are admirably combined. Its gaseous content gives the balloon its permanent buoyancy, and enables it to rise in a calm, while its peculiar form —so unlike that of the globular balloon—enables it to stand like a kite against the wind, by which it is not depressed, but driven upwards. But the most admirable feature, perhaps, of this new contrivance is its peculiar construction, which enables it to retain its distended form amid the varying conditions of atmospheric pressure, and despite the loss of gas entailed by diffusion through the rising and falling of the balloon. Strange as it may seem, this stability of form has been secured without resorting to any mechanical aids or appliances whatsoever; it is maintained solely by means of the equal distribution of pressure exerted within the balloon itself.

The kite-balloon has the form of a long cylinder, terminating at each end in a hemisphere of exactly the same diameter as the cylinder itself. The balloon is secured somewhat like a kite, and placed obliquely against the wind. Moreover, it is divided within by a horizontal gas-tight partition which virtually separates it into two distinct compartments; the upper and larger compartment receiving the gas. The inner partition contains sufficient material (balloon-cloth) to admit of its distention. Indeed, when the upper compartment of the balloon is entirely filled, this partition is pressed tightly against the lower wall, or belly, of the

balloon, so that the entire cylinder, with its hemispherical appendages, is fully distended.

The inner partition being depressed against the outer wall of the balloon, the volume of the lower compartment — technically known as the "ballonet"—is reduced to *nil*. Now, as soon as the balloon ascends, an expansion of gas takes place; the excess being discharged by means of an automatic safety-valve. In consequence of this discharge, a vacuum is created in the lower compartment. This, however, is connected by a clack-valve with the outer air, which at once rushes in to fill the vacuum caused by the escaping gas. This clack-valve, which is fastened to the belly of the balloon, is always exposed to the wind, and works automatically; permitting the entrance of the air, but preventing its escape. By means of this device, the balloon always remains fully distended—at first with pure gas, and afterward, according to the condition of the ballonet, with gas and air. Owing, however, to the partition in the interior of the balloon, these two gases always remain entirely separated; the heavier gas — the air — remaining below, *i.e.*, in the ballonet. Thus, the balloon, in course of time, constantly increases in size.

Another important feature of the kite-balloon is known as the steering-ring or steering-pouch. This is disposed about the lower part of the balloon in much the same manner as the belly-fins are attached to the body of an eel. A clack-valve attached to the upper end of this contrivance admits the air, which escapes through an opening at the lower end. In this way the steering-pouch can be distended and the balloon placed in the direction of the wind—an arrangement indispensable to the proper operation of the two clack-valves.

The experiments made with balloons constructed upon the above principle have proved most satisfactory. The balloons possess remarkable stability; and they can ascend and remain aloft during a heavy gale. In this respect, indeed, the performances of the captive balloons have exceeded all expectation. The first attempts, it is true, were not entirely free from drawbacks. Probably the most serious of these were the oscillations of the balloon itself. These oscillations,—resembling those of a pendulum, — although not violent, nevertheless acted as a disturbing element, and occasionally interfered with the observations of the aeronaut. To obviate this difficulty, a kite-tail and a small globular balloon have been attached to the lower end of the balloon; and by this means a perfectly steady motion has now been secured. A firmer and more quiet aerial observatory, even in the heaviest

weather, than that furnished by the kite-balloon to-day, is scarcely conceivable.

The balloon has been tried in all kinds of weather. It is said that during the manœuvres at Kiel, an ascension took place, although the wind blew at the rate of forty-two miles an hour. A kite-balloon, used for meteorological observations at Strasburg, remained aloft during a snow-storm of great violence for two days and three nights; and, although somewhat depressed by its weight of snow, the usefulness of the balloon was by no means impaired.

Owing to the increased strain of the kite-balloon, the tensile strength of the cable has been greatly augmented; and by reason of the great improvements now made in cable construction, it has become possible to obtain greater tensile strength without a corresponding increase of weight.

Under these circumstances it is not astonishing that the achievements of German aeronauts should have proved extremely satisfactory. During the manœuvres the balloon was always stationed at the front, where it proved a valuable post of observation; moreover, owing to its facility and rapidity of motion, it was used as the most suitable vehicle for conveying important despatches to the commanding general. In this connection, I wish to refer to an excellent feature of aeronautic training in Germany. In addition to their technical education, the officers of our Aeronautic Corps must pass through a course in tactics, in order that they may be able immediately to utilize the results of their observations. In France and Russia it is different. There the education of the officers in the aeronautic branch of the service is confined solely to the technic of the science. The superiority of the German method is obvious. It is impossible to take observations from the car of a balloon successfully, without practical training. The eye of the observer must become accustomed to gauge distances. The configuration of a landscape as seen from the car of a balloon is an entirely different thing from what we imagine it to be; and many details, such as the outlines of fortifications, etc., are visible only to the experienced observer. In short, the aeronaut, like the navigator, gradually acquires a peculiar power of vision which enables him to detect objects that escape the scrutiny of the layman.

The science of military aeronautics has proved particularly useful to the foot artillery; while its serviceability in the siege of fortresses can scarcely be overestimated. One ascension frequently suffices to observe the fortifications, as well as the batteries to be attacked; and these are at once cartographically registered. What a valuable adjunct a well-

equipped and carefully organized aeronautic troop would have been to the American army in the recent war with Spain! Had some of the American vessels engaged in blockading the harbors of Cuba been equipped with a complete kite-balloon outfit, the task of investment would have been greatly facilitated, the enemy's fortifications would have been immediately exposed to view, and the position and number of the Spanish boats at once definitely ascertained.

To the enemy, the captive balloon becomes an object of attack, upon which the fire of both musketry and artillery is frequently trained. The question here involved is obviously of the highest importance; and considerable time and labor have been devoted by the German Government to its solution. Investigation has now shown musketry-fire to be quite ineffective; for, owing to the difficulty of measuring height and distance, the balloon is hard to hit. Moreover, a few bullet-holes entail but a slight loss of gas, and cannot, therefore, inflict much damage. In the case of heavy guns, however, the matter assumes an entirely different aspect. Cannon loaded with shrapnel have proved very effective,—more particularly when the balloon has been stationary, the range not too short, and the distance approximately known. Capt. Moedebeck states that at long range the destruction of the balloon by the batteries is a comparatively simple matter. At short range, heavy guns are too unwieldy to be effective. Krupp, in 1870, sought to obviate this difficulty by the construction of a "balloon-gun"; but of his experiments with this weapon I have as yet been unable to obtain any information.

What has been said of the effectiveness of battery-fire applies to the stationary balloon only. By a constant change of position and altitude, the security of the balloon is greatly increased. Such a change of position is by no means difficult for our German aeronauts, whose equipment permits of great mobility. One of our most experienced aeronauts, Capt. Gross, has expressed the opinion, now generally accepted, that the effectiveness of field-pieces or heavy guns is greatly diminished so long as the balloon is kept in constant motion. Experiments have proved the advisability of keeping the balloon at a distance of 5 kilometres from the batteries,—a distance which still affords the aeronaut excellent facilities for observation.

When attached to a vessel, the mobility of the balloon is greatly increased; and it must be regarded as an invaluable adjunct to a blockading fleet.

I have hitherto confined myself to a discussion of the captive balloon, solely because of its serviceability for purposes of military reconnais-

sance. This article would be incomplete, however, without a reference to the achievements of our military aeronauts with the free balloon, so frequently used in every part of the world.

Ascensions with the free balloon serve, above all, to increase the technical knowledge of the aeronaut in every possible way. To pilot a globular balloon successfully through the uncertain currents of the air is an extremely difficult task, for which the aeronaut must be qualified by long study and practical experience. As the course of the balloon is affected by atmospherical conditions, the aeronaut must acquire a knowledge of the fundamental principles of meteorology; while, at the same time, a familiarity with the laws governing the direction of air-currents is absolutely essential.

But it is not practical technical knowledge alone which is benefited in this way. All the attributes, such as energy, keenness of observation, and rapid decision, are prominently called into play. The diverse conditions under which a landing must be effected demand rapid judgment. The aeronaut must, at a glance, scan the ground, and choose his landing-place. He must also open the valve at the given moment, and pull the life-line at the very instant the balloon touches the ground. The drag-anchor, with which balloons were formerly equipped, has now been supplanted by a very simple device. By means of a life-line, the aeronaut, on touching ground, can rip open the balloon from pole to equator, in such a way as to effect an almost instantaneous discharge of the gas; by which means, the monster, whose death-throes were formerly fraught with serious danger to the aeronaut, is at once despatched.

Owing to the ever-varying conditions and the constant dangers incurred, ascensions with the free balloon have proved splendid tests of the nerve and character of our military aeronautic officers. Indeed, the ascensions, both altitudinal and long-distance, which have taken place at Berlin within the last few years may be ranked among the foremost achievements in modern aeronautic science. Voyages were undertaken in all kinds of weather,—the order given, its execution became imperative. Thus, ascensions were made in snow, wind, and rain; and on several occasions the balloon was driven to a height of 6,000–7,000 metres. That the investigations of our military aeronauts have been rendered available to science generally, is due to the initiative of His Majesty, our broad-minded Emperor. H. HERGESELL.

ISOLATION OR IMPERIALISM?

THE year 1898 will be one of the epoch-marking years in the history of the United States. In this year is to be decided the great question whether this country is to continue in its policy of political isolation, or is to take its rightful place among the great World-Powers, and assume the unselfish obligations and responsibilities demanded by the enlightened civilization of the age.

Many of our statesmen, forgetting that *prestige* is as dear to nations as to individuals, and underestimating the inherited racial instincts, the restless activities, and the aggressive enterprise of our people, wrongly imagine that they can remain contented with political and commercial isolation, and satisfied, as are the Chinese, to be guided in questions of immediate and world-wide importance by quotations from obsolete texts from the wise sayings of remote ancestors.

When Washington wrote his justly celebrated Farewell Address, nations were as distant from each other in time, and communication was as slow and difficult, as at the beginning of the Christian era; but steam and electricity have so drawn the ends of the earth together that civilized society is fast becoming one highly organized and interdependent whole.

Each generation has the power to shape its own destinies; and had Washington and his fellow-patriots been governed by warnings against a departure from traditions, our present form of government would never have been established, the Constitution would have been rejected by the States, and untold evils would have resulted. Madison, when arguing for the adoption of the Constitution, met arguments very like those now being made in favor of political isolation, in the following language:

> "Is it not the glory of the people of America that, whilst they have paid a decent regard to the opinions of former times and other nations, they have not suffered a blind veneration for antiquity, for custom, or for names, to override the suggestions of their own good sense, the knowledge of their own situation, and the lessons of their own experience? To this manly spirit posterity will be indebted for the possession, and the world for the example, of the numerous innovations on the American theatre in favor of private rights and public happiness."

In answer to the arguments that there is no constitutional provision

for governing acquired territory, it is only necessary to quote from Section 2, Art. IV of the Constitution:

"The Congress shall have power to dispose of and make all needful rules and regulations respecting the territory or other property belonging to the United States."

This country has acquired territory by purchase, by conquest, by treaty, and has made such laws for the government of such acquired territory as seemed most suitable to the requirements. There is no constitutional bar to this country having colonies or dependencies corresponding to the Crown colonies of Great Britain, or to the self-governing colonies, such as New Zealand and Natal.

It has been demonstrated in the past that colonial expansion has met with the approval of the people both in this country and in England. It is true that for a number of years prior to 1885 there was in Great Britain a large following—mainly of the Manchester School—believing, as expressed by an English statesman of the time,

"that the destiny of our colonies is independence; and that in this point of view the function of the Colonial Office is to secure that our connection, while it lasts, shall be as profitable to both parties, and our separation, when it comes, as amicable as possible."

Fortunately for civilization and for the future of the English-speaking peoples of all lands, this indifference to colonial interests and to the integrity of the Empire which was characteristic of the "Little Britain" party in England, as shown by the withdrawal of the Imperial troops from the Transvaal after Majuba Hill, and the failure to relieve Gordon at Khartoum until too late, has given place to the enthusiastic followers of the "Greater Britain" school of to-day. The party of political isolation in England has suffered almost disintegration, just as in this country the old Federalist party suffered after its opposition to the acquisition of Louisiana by Jefferson, and as the Whig party suffered after its opposition to the annexation of Texas.

The world has been divided into two opposing colonial systems: (1) the Continental European, or government of provinces or dependencies from the central or home government—acquiring colonies for the advantage supposed to accrue from the monopoly of their commerce; and (2) the Anglo-American system, where the government is the creature of the union of previously autonomous parts, as in the United States and Canada, where colonies are encouraged to establish local self-government, and where colonies such as the English Crown colonies are thrown open to unrestricted trade. We thus have two antagonistic systems and

forces contending for world-supremacy. Continental Europe inherited from Rome the system of governing colonies for the exclusive benefit of the home governments; while the Anglo-Americans have developed their systems from the germs inherited from their Teutonic ancestors of Northern Europe. As Mr. Fiske has said:

"In the four discreet men sent out to speak for their townspeople in the old Anglo-Saxon County Assembly, we have the germs of institutions that have ripened into the House of Commons, and into the legislatures of modern kingdoms and republics. In the system thus inaugurated lay the future possibilities of such gigantic political aggregations as the United States of America."

The defeat of Varus by Arminius prevented the extension of Roman dominion over the tribes around the south shores of the Baltic. Four hundred and forty years after the destruction of the Roman legions of Varus the descendants of the victors landed in Britain; bringing the germs of English freedom and of the American Federation of States, the Federation of Canada, of Australasia, and of South Africa. And if we are true to our destiny, our high privileges, and advantages, these germs will ripen under Anglo-American coöperation and direction into Tennyson's "Parliament of Man and the Federation of the World."

In our sea-girt homes of America, South Africa, and the islands of the seas, free—so long as we stand together—from interference from the military systems of Continental Europe, our race will be enabled to develop to the ultimate free institutions and the principles of local self-government.

In this connection it may be profitable to note how the elimination of danger from Continental European interference has been followed by an advance in the principles of freedom. It was not until after the English fleet had dispelled all danger of the threatened invasion of England that the Barons assembled at Runnymede and forced the unwilling John to sign the Great Charter. Three centuries later, with the destruction of the Spanish Armada, representative government made rapid advances; the Parliament becoming more and more independent. After Trafalgar and Waterloo England ceased to fear invasion, and entered upon that wonderful system of reforms—extension of the suffrage, tax and tariff reforms, administrative reforms, reforms of the civil service—which has made her the commercial and financial centre of the world, and, with the exception of the United States, the freest country in the world.

The descendants of the sea-rovers of Hengist rested for more than a

thousand years in their fair island-home before they crossed the greater ocean and began their world-conquest. Here, in this New World, the two systems that had struggled for mastery in the Old World met face to face. France and Spain were first on the ground; they had taken possession of the larger part of the western hemisphere; and had established colonies which were as complete examples of despotic, and at the same time paternal, government as could be devised.

With the advent of the English colonies, a new and untried element of colonial administration was inaugurated. The old historian, Hutchinson, writing in the year 1619, says: "This year the House of Burgesses broke out in Virginia"; while the Pilgrims, on landing in Massachusetts, drew up a solemn compact of government combining themselves into a civil body politic, "By virtue hereof to enact, constitute, and frame such just and equal laws . . . as shall be thought most mete and convenient for the general good of the Colony."

The revolution here put into operation has extended to the English colonies in all parts of the world. In this epoch-marking year of 1898 the remaining vestige of the Roman system of colonial government is to be driven from the western hemisphere; descendants of the Norse sea-rovers are to carry the victorious banner of our civilization to the confines of the Far East; and there, in conjunction with their kinsmen from Britain, they are to settle for all time the question whether the repressive militarism of the Middle Ages shall be extended over more than one-half of the population of the globe. It is the old contest of the centuries transferred to another field of action. On one side are represented the Powers of Continental Europe, striving to obtain concessions looking to the acquisition of possessions in the Far East, with the intention of closing the ports of such acquired territories to the commerce of the world, by the placing of high customs duties on all imports other than those from the country in control. On the other, Great Britain and the United States, being enabled by their resources, the industry and inventiveness of their peoples, and their facilities for reaching foreign markets to compete on equal terms,—and having a large and increasing population dependent on foreign markets in which to dispose of an increasing surplus production,—their interests demand that no combination of Powers be allowed to close the ports of Asia to their commerce.

Hitherto the United States has lent no aid to England in her efforts to avert the impending danger. Fettered by its policy of isolation, this country has been strangely remiss in asserting its rights and guarding its interests. It remained silent while France acquired Madagascar

and abrogated our treaty rights by placing discriminating duties in favor of French products. We make no protest at the occupation of Chinese territory by Russia, Germany, and France, and the threatened dismemberment of the Chinese Empire. We seem to have forgotten the provisions of the treaty of 1858 with China, Art. XXX of which reads:

"The contracting parties hereby agree that should at any time the Ta Tsing Empire grant to any nation the right, privilege, or favor, connected either with navigation, commerce, political or other intercourse, which is not conferred by this treaty, such right, privilege, and favor shall at once freely inure to the benefit of the United States, its public officers, merchants, and citizens."

Why, but for our isolation paralysis, do we not unite with Great Britain in safeguarding the interests of our people in China and in other countries of Asia? Our fathers met the "Family Compact" of 1761 and the Holy Alliance in 1823 when they were comparatively weak; and now that we are rich and powerful, we should not hesitate to meet, if necessary, a "Concert of the Powers." The conditions to-day are like those of 1823, when Jefferson wrote:

"Great Britain is the nation that can do us the most harm of any one, or all, on earth; and with her on our side we need not fear the Old World. With her we should most sedulously cherish a cordial friendship."

When the Holy Alliance threatened to extend the Continental system to America, Great Britain offered her assistance; and the Monroe Doctrine was promulgated, and the threatened dangers averted. A few weeks ago the British Chancellor of the Exchequer said: "We do not regard China as a place for conquest or colonization by any European or other Power." Here is a new Monroe Doctrine promulgated.[1] Shall this, the most powerful nation in the world, certain to have in the future larger interests in the open ports of China than any other country, fail to reciprocate England's proffered aid of 1823, and refuse to join our natural ally in putting in force this new Monroe Doctrine, which alone can avert the evils which threaten? The tone of the Continental press, and the information from Americans travelling in Europe, demonstrate that, with singular and significant unanimity, the sympathies of the people of Europe are with Spain in the present war; and it is no longer a secret that, but for the firm and friendly stand taken by Great Britain, this country would have recently had to face the Concert of Powers. Count Goluchowski, the Austrian statesman,

[1] President Monroe, in his famous Message, December 2, 1823, said: "The American continents . . . are henceforth not to be considered as subjects for future colonization by any European Power."

voiced the sentiment of Europe in a remarkable speech delivered in November last:

"A turning-point has been reached in European development. The destructive competition with the transoceanic countries, which has partly to be carried on at present and is partly to be expected in the immediate future, requires prompt and thorough counteracting measures if the vital interests of the peoples of Europe are not to be gravely compromised. They must fight shoulder to shoulder against a common danger, and must arm themselves for the struggle with all the means at their disposal. As the sixteenth and seventeenth centuries were absorbed by religious wars, and as the eighteenth century was distinguished by the triumphs of liberal ideas, and our own by the appearance of the nationality question—so the twentieth century will be for Europe a period marked by the struggle for existence in the politico-commercial sphere. European nations must close their ranks in order successfully to defend their existence."

Now what is this dread spectre with which the "transoceanic countries" are threatening Europe, and against which it is necessary to unite and arm? First, we are furnishing the consumers of Europe with the necessaries of life more cheaply than they can be obtained at home. Second, we offer hope to all who wish to improve their condition by acquiring homes in the fertile lands of this country and the British colonies. Third, the United States, by her Monroe Doctrine, by placing a veto on European territorial extension in the New World, simply guarantees the freedom of the markets of the New World to all countries on equal terms, and prevents European Powers from acquiring territories in this hemisphere and turning such acquisitions into closed preserves for their own exclusive benefit.

Great Britain is now contending for the same freedom of commerce in China and the Far East. Wherever the British flag is planted the commerce of the world is admitted on the same terms as the commerce of the mother-country. Here we have a sharp contrast between the two opposing forces. One represents the policy of closed ports, or monopoly and repression, the administration of colonial possessions for the exclusive benefit of the home government,—this is the policy which Count Goluchowski advises Europe to arm to enforce. The other represents the policy of open ports, or equality of commercial interchange, local self-government, the revenues of colonies to be expended only for the benefit of the colonies,—to prevent the extension of this policy Europe is arming and building warships. The German Emperor has proclaimed that henceforth Germany is to be a World-Power; and Germany's determination to be a colonial Power is well known. This can be accomplished only in one or more of three ways: (1) By acquiring possession of a portion of China or some other populous region in Asia;

(2) by acquiring Holland and the large and populous colonial possessions of the Netherlands; (3) by colonizing in Southern Brazil and Argentina, and acquiring possessions there. Germany has as yet no colonial possessions suited to the settlement of people from Northern Europe; nor has she succeeded in inducing any appreciable number of her people to find homes in the German colonies in Africa and the South Pacific. The bulk of the large emigration from Germany comes to the United States; and it is evident that the German Government is taking measures to divert this emigration to countries where Germany may hope to derive in the future some benefit from these intelligent and industrious people, and where their descendants will not cease to be Germans, as they do in this country. The United States Consul, writing from Santos this year about the German colonies in Brazil, says:

"Since the favorable report of Herr Krauel, following his visit to the German colonies in Southern Brazil last year, and the revocation of the Heydt law, enacted in 1859 to prevent German emigration to Brazil, an active propaganda has been initiated at Hamburg to turn emigration hither from the United States. It is said with truth that the German who emigrates to the United States is lost to Germany. . . . German colonization in Southern Brazil is no new, but in fact a very old, thing, notwithstanding the *policy of the German Government has recently effected a right-about-face in its attitude toward the subject.*"

The recent acquisitions of Germany in China are significant as pointing to the evident intention of that country to obtain control of populous countries in the Far East and to monopolize the trade, to the exclusion of commercial rivals. The present low customs rates of China—most honestly and impartially administered under Sir Robert Hart's superb customs service—admit on equal terms the products of all countries; and there can be no reason for the aggression of the European Powers on the coasts of China, other than the intention of carrying to that populous country the monopolistic exclusion which has always followed the colonial expansion of Continental European Powers. Prince Henry, on his departure from Kiel for China, assured the Emperor that his mission was to "declare in foreign lands the gospel of your Majesty's hallowed person"; and he was thus directed by the Emperor: "Should anyone attempt to affront us, or to infringe our good rights, then strike out with the mailed fist."

Germany has foreign possessions, but practically no colonies and but little sea-borne commerce under her to defend; she has only a limited coast-line to protect; yet her naval appropriation calls for an expenditure of $118,000,000,—the last ship to be completed by the year 1904.

The new ships are not to be coast-defence vessels, but battleships and cruisers with large coal capacity, suitable for distant service. Russia has no colonies over the seas, and but little foreign commerce to protect; yet this year she adds to her already large yearly expenditure for naval construction over $46,000,000 for ships to be completed within the next seven years. France, in spite of the fact that she has a navy more than ample to protect her commerce and her colonies, provided she has no aggressive designs, has recently appropriated $160,000,000, to be expended on ships to be completed by 1904.

Notwithstanding the vast naval preparation of the three European Powers mentioned, it is fated that Anglo-American descendants of the mighty seamen whose glorious achievements are the common heritage of our race must ever hold dominion over the seas; provided there is mutual aid and coöperation. The insular position of the United States and the British possessions renders large standing armies unnecessary, so long as these two countries are on friendly terms and maintain command of the seas. Great Britain governs an Empire scattered all over the world, and aggregating a population of 400,000,000, with a standing army of only 220,000 men—an army less than that of some of the smaller Continental Powers with no colonial possessions to defend.

With just and wise administration, colonial possessions are a source of strength rather than of weakness. The designs of the Powers in the Far East, if successful, will deprive this country of an already large market, which must increase to enormous proportions in the near future, and, by depriving Great Britain of her best market, will lessen the ability of our best customer to purchase our products. Last year Great Britain purchased our products to the value of $483,625,024; and she and her colonies took 60 per cent of the total value of our exports to all the world. The value of the trade of Great Britain and the United States with China amounts to six times that of the combined trade of Germany, France, and Russia with the Celestial Empire; consequently, England and the United States have a right to declare that their interests in China are paramount, and to act in concert in safeguarding those interests. China, the United States, and the British possessions have the largest extent of coast-line fronting on the Pacific, with a growing community of interests. Great Britain has secured the important naval stations of Hong Kong and Wei-hai-wei for the protection of her large interests; and she has a large and efficient auxiliary force conveniently near in India.

Fortunately, we can have at Manila a most advantageous distribu-

ting-point for our commerce, as well as a naval base of great strategic importance. By good government and just administration, the natives of the Philippines can be made a prosperous people, and, under the discipline and leadership of American officers, an effective fighting-force, if necessary. What can be accomplished in this way has been effectively demonstrated in India and Egypt.

It would be folly to allow the coal deposits in the Philippines ever to pass from our control. With these islands in our possession, the English-speaking peoples and Japan will control all the coal easily accessible to the Pacific and Indian oceans. The superior steam coals of New South Wales extend to the shores of the great and impregnable harbor of Sydney. England will ere long have an important naval station at Sandakan in North Borneo; and coal extends to that great harbor. These, with the coals of Alaska, British Columbia, Vancouver, Washington, and Oregon, will furnish supplies for ships on the Pacific in times of war; and so long as Great Britain holds Gibraltar, Aden, Cape Town, and the Falkland Islands, and the United States controls Hawaii, the Philippines, and the canal route connecting the Atlantic with the Pacific, these two Powers can dominate the Pacific and Indian oceans.

Our race has two important characteristics, as has been well shown by Mr. Kidd in his "Social Evolution": (1) the highly developed power of individual initiative, and (2) what he has well termed social efficiency. The Tropics are peopled with millions of low social efficiency; and it seems to be the fate of the black and yellow races to have their countries parcelled out and administered by efficient races from the Temperate Zone. If such administration be just, wise, and humane, like the administration of Lord Cromer in Egypt, it will be for the upbuilding and enlightenment of the peoples of the Tropics, and the advance of the blessings of civilization over the world.

The world's future depends largely on the decision which we are about to render as to the policy of this country in relation to the great problems now confronting us. If America is henceforth to be one of the determining factors in advancing and defending the principles of Anglo-Saxon civilization throughout the world, the dangers which threaten that civilization will disappear like the mists of the morning. Already some of the good effects of the abandonment of our policy of isolation are apparent, both at home and abroad. Introspection in nations, as in individuals, is frequently an evidence of disease; and it is questionable whether the political isolation of this country, and the consequent narrowing of our political horizon, may not have been a cause

of the unrest and internal dissensions which have been so notable during recent years, and which have brought to the front the purveyors of political quack cure-alls for imagined as well as apparent evils. Provincialism and parochial politics have in many localities foisted inferior men into places of public trust. Since we have, by recent events, been forced to face wider responsibilities and a broadening field of action, some of the evils with which the country was supposed to be afflicted have vanished.

In Great Britain there has been a marked improvement in the tone of public life, a broader statesmanship, even in the consideration of local affairs, and an improvement in the public service, both national and municipal, since the great colonial expansion of the Empire and the widening of the external activities of that country.

This country, by its Tariff restriction, which is but one of the evils resulting from our policy of isolation, is threatened with discrimination against our imports by Germany and other European countries. But a more serious danger was the growing popularity of an Imperial British Customs Union, which would have been most detrimental to our interests. The Ottawa Conference of the Representatives of the Self-Governing Colonies, held in 1894, with the approval of the Mother-Country, resolved:

"This Conference records its belief in the advisability of a customs arrangement between Great Britain and her Colonies by which the trade within the Empire may be placed on a more favorable footing than that which is carried on with foreign countries . . . that until the Mother-Country can see her way to enter into customs arrangements with her Colonies, it is desirable that, when empowered so to do, the Colonies of Great Britain . . . take steps to place each other's products . . . on a more favorable customs basis than is accorded to the like products of foreign countries."

Substantial progress has been made along the lines indicated above; the most important action being that of the Dominion of Canada last year. That country, provoked by our recent prohibitive Tariff Law, and anxious to give expression to Imperial patriotism resulting from the Queen's Jubilee, determined to give a preferential reduction of 25 per cent to such countries as admitted Canadian products practically free of duty. This reduction is, at present, applicable only to Great Britain, New South Wales, British India, and the British Crown colonies. As the German and Belgian treaties with Great Britain stood in the way of putting in force the Canadian concessions, these treaties were denounced. The Queen, in announcing this to Parliament, spoke of these treaties, "by which I am prevented from making with my Colonies such fiscal arrangements with my Empire as seem to be expedient." In Australia

this policy of preferential trade with the Empire is making substantial progress. This year the Premiers met at Melbourne, and adopted a resolution that any tariff framed by the proposed Australasian Federal Parliament should give a preference to articles the produce or manufacture of the United Kingdom, and that in default of a Federal tariff the Premiers should recommend their respective Cabinets to alter the tariffs of the different colonies so as to give a substantial preference to the United Kingdom and to the British colonies; thus taking advantage of the denunciation of the German and Belgian treaties to improve the trade relations of Australasia with the British Empire.

Mr. Cecil Rhodes proposes to inaugurate in Rhodesia, the latest acquisition to the British Empire, having an area of eight hundred thousand square miles, a plan for a customs union. It is proposed, first, that the duty to be charged on imports of British goods shall never exceed the duty at present levied by the Cape Colony, a duty for revenue only, averaging about 9 per cent; and second, the Colony surrenders the right to erect a tariff protection barrier between itself and the remainder of the British Empire. This will extend to any colonies which may hereafter come into a customs union with Rhodesia. Thus commercial union must become one of the fundamental conditions of federation in South Africa; and as this federation is assured by the inevitable law of progress, and will include the British colonies, the Transvaal, and the Orange Free State, it will have a tremendous effect in shaping the policy of Imperial federation.

Large as is our commerce with the British Empire, it is but in its infancy, as the British colonies must increase in population more rapidly than other parts of the world; and they are essentially a trading people. For example, less than four millions of Australians have a foreign commerce almost double the foreign commerce of the one hundred and thirty millions inhabiting the Russian Empire; and Canada, with less than one-sixth the population of South America, buys from us more than twice as much each year as do the South Americans. It is, therefore, greatly to our interests that no preferential customs arrangement should be made, as proposed by the colonial possessions of Great Britain. If we control Cuba, Porto Rico, and the Philippine Islands, and throw them open to the commerce of the world, on equal terms, and put our own Tariff on a revenue basis, we shall be in a position to prevent foreign discrimination against our commerce. At last both of our great political parties realize how essential to our interests is the opening of markets to our increasing production. A communication from the Secre-

tary of State to the Secretary of the Treasury, and transmitted by the latter to Congress on June 14, 1898, asking for a commission to study the commercial conditions of China, contained the following significant statements:

"The export trade of the United States is undergoing a transformation which promises profoundly to influence the whole economic future of the country. As is well known, the United States has reached the foremost rank among the industrial nations. For a number of years its position as the greatest producer of manufactures as well as of raw products has been undisputed, but, absorbed with its own internal development, and satisfied, for the time being, with the enormous home market of 70,000,000 of people, it has, until recently, devoted but little concerted effort to the sale of its manufactures outside of its own borders. Recently, however, the fact has become more and more apparent that the output of the United States manufactures, developed by the remarkable inventive genius and industrial skill of our people with a rapidity which has excited attention throughout the great centres of manufacturing activity in Europe, has reached the point of large excess above the demands of home consumption. . . . The United States has unfolded to it, in vast regions as yet unopened to the full activity of commerce, possibilities of commercial expansion limited only by the use we make of them. . . .

Without reference to schemes of this character, it would seem to be obvious that the United States has important interests at stake in the partition of commercial facilities in regions which are likely to offer developing markets for its goods. Nowhere is this consideration of more interest than in its relation to the Chinese Empire. As is well known, three great European Powers have established themselves at points of vantage in that Empire, which will enable them to exercise a direct influence upon its commercial destiny."

In the interests of civilization and humanity, this country should retain the Philippines. Then the chain of islands extending along the entire eastern coast-line of Asia will be owned by Japan, the United States, Great Britain, and the Netherlands—all seafaring nations, and countries having like interests to guard. As the interests of Great Britain, Holland, and the United States are for peace and mutual coöperation, their possessions in the Far East can be held by a small military force. Should the United States, however, retain less than all of the Philippines, there would be a scramble among certain European Powers for the possession of the remainder; and this scramble might result in a disastrous war. The acquisition of any of these islands by any Power other than the three above named would introduce a disturbing element, and necessitate the keeping of a larger military force in the Far East. The interests of peace and progress demand that this country should accept the responsibilities thrust upon it by Dewey's glorious victory at Manila. Wherever our flag shall be planted, let it remain and carry freedom from oppression. But we should not forget that peoples who have for centuries been subjected to misrule and oppression have yet to learn the

principles of self-government. Let us avoid the criminal blunder made in the past, when we bestowed with unthinking liberality the highest privilege of Anglo-Saxon freedom upon an illiterate, alien race just emerging from bondage,—a priceless privilege which our fathers attained only through centuries of patient self-development,—and thus prevented the placing of the rights of suffrage upon an educational basis applicable to whites and blacks alike. Let us remember that Spain lost her vast colonial possessions because she failed to give wise and just government, and neglected to place her civil and military service upon the basis of merit, open alike to all upon ascertained fitness. As has been well said, "the corruption of her public service, civil and military, has cost Spain a world."

Our administrators have now an opportunity to achieve the most momentous results in broad statesmanship ever vouchsafed to the rulers of any age or country. I submit that:

First. There should be a treaty of arbitration entered into between the United States, Great Britain, the Netherlands, and Japan, into which other nations should be invited to enter.

Second. These countries should unite in making coal as much a contraband of war as powder; coal being equally with powder essential to a modern warship. This would be a most potent conservator of peace.

Third. All countries acquired by the United States should be thrown open to the commerce of the world on equal terms.

Fourth. The United States, Great Britain, and Japan should proclaim a new Monroe Doctrine applicable to China; and coöperate with that country in preventing acquisition of territory there by European Powers.

Fifth. The United States, Great Britain, and the Netherlands should proclaim and maintain a new Monroe Doctrine applicable to the vast islands of the Indian Archipelago. The possessions of these three countries and Japan encircle the Pacific Ocean with an unbroken chain from Cape San Lucas, California, to New Zealand, with this country in possession of the central point of strategic vantage, Hawaii; and ere long this country will control the entrance into the Pacific from the East, as Great Britain controls the short route from the West.

From the blood of our heroes, shed at Santiago and Manila, there shall arise a New Imperialism, replacing the waning Imperialism of Old Rome; an Imperialism destined to carry world-wide the principles of Anglo-Saxon peace and justice, liberty and law.

JOHN R. PROCTER.

LESSONS OF OUR WAR LOAN.

THE United States has floated a $200,000,000 loan at the lowest rate of interest at which a nation ever disposed of its obligations in time of war. It has received subscriptions of $7 for every $1 of bonds offered the public, or, roundly, $1,400,000,000 for the $200,000,000 loan. Under the provisions of the law as passed by Congress, every subscription made by a syndicate, corporation, or association was rejected; Congress having taken the broad ground that individuals should have preference. Every subscriber asking for more than $4,500 received no portion of his subscription, as the entire loan was absorbed by individual offers for smaller amounts; the allotment being made under the provisions of the law so that the humble investors had preference over the richer ones. Half of the loan, more than $100,000,000, has gone to 230,000 people each of whom subscribed for $500 or less. The number of persons who applied for the bonds reached 320,000; and if they were mustered into military ranks they would outnumber by almost 100,000 our army of regulars and volunteers enlisted for the Spanish-American war. Standing at dress, side by side, they would form a line one hundred and twenty miles long,—a line that would reach clear across Cuba at its broadest point and half-way back, or from Washington to Philadelphia. Had all these investors presented their subscriptions with the currency attached, it would have required three times the cash held in the vaults of the thirty-six hundred national banks of the country. Some idea of the enormous total of $1,400,000,000 subscribed by these 320,000 persons may be gained by a comparison with the amount of money in circulation in the United States on August 1, 1898. On that date the money of all kinds in circulation aggregated $1,809,198,000. If the United States had accepted in currency all the subscriptions made, the Treasury would have absorbed seven-ninths of all the money in circulation.

More than $100,000,000 in cash was turned into the Treasury as the subscriptions were made, and before the delivery of bonds was begun. The remaining $100,000,000 is being gathered in as fast as the augmented machinery of the Treasury can collect it. The handling of this

vast sum has been so careful, that rates of interest in the New York money market, after the books were closed and the bonds began to be issued, were as low as 1½ per cent, *i.e.*, materially lower than before the loan was offered. The whole transaction was accomplished with scarcely a perceptible movement at the money centres, and absolutely without creating the smallest degree of stringency or congestion.

Such illustrations as these give some indication of the success of this first experiment of ours with a really popular loan. It has been a phenomenal success; and it presents a good many new features in financial affairs. It furnishes the only real test we have ever had of a popular subscription. It exhibits the credit of the United States in the most favorable light in which it has ever been seen. It shows the investing strength of the people to be greater than the most optimistic would have supposed, and our gain in financial *prestige* must be regarded as one of the foremost results of the war.

From the time when Congress, with hardly a word of debate, appropriated $50,000,000 for the national defence to the actual beginning of hostilities, scarcely a day passed without some event which made it apparent that the Government revenues must be augmented by loan. The Bill to provide ways and means to meet war expenditures was a measure which showed far more courage than legislators are apt to evince when such a crisis comes. It was a measure that laid the tax-collector's hand on every business—in fact upon every citizen—and was designed to draw into the Treasury an enormous additional revenue. The operation of a revenue law is too slow, however, for such exigencies as war; and, with expenses reaching an average of $1,250,000 a day, the necessity for an issue of bonds was plain. When it became known that Congress contemplated fixing the rate of interest at 3 per cent there was a quiet protest from some of the great financiers. Three per cent, they declared, was too low. They pointed to the rate at which former bond issues had been made in time of peace. They called attention to the fact that the 4-per-cent bonds of 1925 were selling as low as 117¼, a basis which would net the investor nearly 3¼ per cent. They asked why heavy subscriptions to a short-term bond at 3 per cent should be expected, when one could go into the market and buy a bond of exactly as good character, and with a far longer term to run, on a basis that would net 3¼ per cent. Not a few of the financial leaders were sore in spirit over the criticism that had followed them after the last Government bond sale. They felt that they had come forward then at a time when the Treasury was in great peril, and had

furnished money that was badly needed, and, in addition to furnishing money, had undertaken a most expensive contract to prevent gold exports. Their profits had been but a fraction of what the public imagined them to be; and the execrations that had been heaped upon them had left little desire at this time to turn in and, from purely patriotic motives, aid the Treasury in its financiering.

The Secretary of the Treasury saw some of the leading financiers who held these views. He met their objections so completely that his suggestion, that the great financial interests should show to the country a broad-spirited patriotism such as would quiet the host of critics, was received with surprising good-will. His suggestion was one that might at first view seem almost Quixotic; considering the rate at which Government bonds were then selling. It was that some of the important financial interests should come together and guarantee, without profit to themselves, the absolute success of the loan,—that they should agree to take all or any part that should be unsubscribed by the people. This underwriting of $200,000,000 of securities at a price substantially higher than that at which similar securities were selling in the market was to be done solely for the good that would follow such an exhibition of disinterested and patriotic financiering.

The result of Secretary Gage's suggestions was, that on the morning of the day the subscription opened two syndicate bids were received: one from the National City Bank, Vermilye & Co., and the Central Trust Company, and the other from a syndicate headed by Mr. J. Pierpont Morgan. Each of these syndicates agreed to take all or any part of the issue not taken by the public. That guarantee put spirit into the loan from the first moment. People said: "If the New York bankers stand ready to take the whole loan twice over, it must be a good thing to have."

There were two reasons why the subscription should be an assured success, in spite of the fact that shortly before it opened Government bonds were selling on a $3\frac{1}{4}$-per-cent basis. One was that, although there were market quotations for the 4-per-cent bonds on that basis, it could not be called a settled or fairly established market price. A few bonds could no doubt have been bought at that price. Any attempt to purchase a large block would have sharply advanced the quotation, although it is probably equally true that a large block thrown upon the market would have depressed the price. The reason why it was certain that a market could be found for the whole issue on a 3-per-cent basis was in the use which could be made of the bonds by national banks as a

basis for new circulation, or to replace the old 4's and 5's which banks had on deposit to secure their circulating notes.

The superiority from the standpoint of profit of the new 3-per-cents over the 4-per-cents of 1925 as a basis for national-bank circulation is shown by the following table:

TYPICAL ILLUSTRATION OF $100,000 INVESTMENT.

	3's of 1908-18 at par.		4's of 1925 at 127¼ @ 128.	
Capital invested	$100,000.00		$100,000.00	
Par value of bonds purchased	100,000.00		78,354.55	
Circulation	90,000.00		70,518.09	
Receipts:				
Interest on circulation (6%)	5,400.00		4,231.08	
Interest on bonds deposited	3,000.00		3,134.18	
Gross receipts		$8,400.00		$7,365.26
Deductions:				
Tax	900.00		900.00	
Expenses	62.50		62.50	
Sinking fund	....		337.66	
Total deductions		962.50		1,300.16
Net receipts		$7,437.50		$6,065.10
Interest on capital invested (6%)		6,000.00		6,000.00
Profit on circulation:				
Amount		$1,437.50		$65.10
Per cent	1.437		0.065	

Advantage of 3's at par over 4's at 127¼ @ 128, August 1, 1898, 1.372 per cent.

The Government Actuary, before the books of the loan were opened, had figured for the Secretary that the new 3-per-cent bonds at par would be equivalent, as a basis for national bank circulation, to the 4-per-cents of 1925, if the latter had been quoted at so low a figure as 111. At that time the actual quotations of the 4-per-cents of 1925 ranged from 120 to 123.

The 3-per-cents of 1908–18 purchased at par, August 1, 1898, as security for circulation of bank notes, will yield a profit of 1.437 per cent. The 4's of 1925, in order to yield the same profit, would need to be purchased at $110\frac{1}{20}$; whereas they were quoted August 1, 1898, at the high rate of $127\frac{1}{4}$ @ 128.

Congress introduced a novel element into Government financiering when it provided that "in allotting said bonds the several subscriptions of individuals shall be first accepted, and the subscriptions for the lowest amounts shall be first allotted."

This latter provision brought a new element of chance into the loan, such as had never been in a bond issue before. No one could tell just where the line would be drawn below which all individual subscriptions would be filled in full, and above which no subscriptions would receive allotments. It was evident that the Treasury could not ask full payment to accompany the subscriptions, because of the impossibility of saying whether an allotment would be made to a subscriber. It was plain, too, that the plan under which the previous bond issue had been regulated, permitting bids to be made without any deposit of earnest money, would never do. A medium was struck. It was decided that by no chance could the *bona fide* subscriptions of $500 and less absorb the total amount. Therefore announcement was made that all subscribers for $500 or less should make full payment; and the Department promised that an allotment of bonds would be absolutely made on every such subscription. Those who subscribed for more than $500 were required to deposit 2 per cent thereof to insure the good faith of the application. Allotments in this class were to be made inversely to the size of the subscription. The most sanguine friends of the popular loan idea hardly anticipated that the subscriptions for $500 and less would reach an aggregate of over $30,000,000 or $40,000,000; and many good judges placed the limit well below those figures. As a matter of fact, the subscriptions for $500 and less reached an aggregate of a little over $101,000,000.

It was evident soon after the books of the loan were opened that persons who wished blocks of the bonds were getting individuals to subscribe in their interest. The Treasury Department immediately interposed such obstacles as it could command in the way of such plans. In every case where blocks of subscriptions came in accompanied by powers of attorney authorizing banks or any person or interest other than the subscriber to receive the bonds, the subscription was held in suspense until the bank or person sending in such blocks of subscriptions made answer unequivocally as to whether or not the subscriptions were *bona fide* and solely in the interest of the persons signing the subscription blanks, and whether the bank or any person other than the subscriber had an ulterior interest in the subscription. More than $40,000,000 of subscriptions were thus suspended, and the persons sending them were catechised as to their *bona fide* character. It was, of course, quite impossible for the Treasury to organize itself into a trial court and take evidence. The Department was forced to accept the statements made by the subscribers, although it used with good effect the machinery

of the Secret Service in verifying such statements. Subscriptions representing millions were returned to the senders, who frankly admitted that they had misunderstood the conditions and wished no improper advantage. It is not claimed that the subscription list was kept entirely clean from subscriptions received in the interest of persons other than the subscribers. Undoubtedly false statements were in some cases made, and blocks of bonds secured in a way not within the spirit of the law; but it is a fact that the most strenuous efforts were used at every stage to prevent persons having no real interest in the subscription from subscribing and immediately assigning their interests to some banking institution.

As the subscription advanced, quotations began to be made for the future delivery of the bonds. Trades were made at 102,—103,—and finally as high as 105⅛. To get the new bonds looked like getting gold dollars at a discount. With standing offers of 3 or 4 per cent premium, it was small wonder that the last days of the subscription saw some phenomenal receipts. On each of the last two days the Department received 25,000 applications. It was not growing patriotism on the part of the humble investors that so increased the mail. It was market quotations showing a substantial premium for bonds that the Government was offering at par.

From the point of view of a popular subscription the loan was in every way an astounding success; but it must not be forgotten that there were elements of speculation as well as patriotism, that there was a market showing immediate profit for every person who could secure a bond.

The task of handling the loan has been one that few people have comprehended. The action of Congress in providing an issue of bonds of so low a denomination as $20, in giving preference to individual bidders, and in providing that allotments should be made in an inverse order to the size of the subscriptions upon all individual offers, made an amount of detail such as had been unknown in the Department's previous experience. The provision for payment in five instalments, and the necessity for interest calculations on each one of these partial payments, added vastly to that detail. Indeed, the task at last was one that was clearly the greatest clerical undertaking in which the Government ever engaged in the same length of time.

Congress is always jealous of departmental preparations in advance of legislation; and no actual step could be taken by the Treasury Department to prepare for this issue of bonds until the war measure had passed both the House and the Senate. The final action was taken when

the House concurred in the Senate's amendment at noon, Saturday, June 11. At 3:30 that afternoon the copy for the preliminary circulars and instruction blanks was in the hands of the public printer. At nine o'clock Monday morning the public printer delivered to the Treasury Department the first instalment of 4,000,000 sheets of printed matter; and the rest followed as rapidly as they could be unloaded from the wagons.

A great force had been engaged in addressing envelopes to contain the subscription-papers and circulars of information. In a little over twenty-four hours after the receipt of the first printed copies the mails were carrying these circulars to every bank, national, State, and private, to every postmaster, and to every express-office in the country, while to 24,000 newspapers details were sent, so that they might give information to the people concerning the character of the Government bond, and how subscriptions would be received.

There was in the arrangements every element of popular success. The bonds were issued in a popular cause. They were issued at a time when money was easy and securities were high. They were issued at par; so that there was no calculation to discourage the most inexperienced investor. Any man with $20 knew that he could invest it, and get a $20 security back. There was no commission, no premium, no restriction as to the character of the remittance. Subscribers were permitted to send their money in any form in which credits could be forwarded; and the Treasury received any form of currency of the United States, any kind of bank-check or draft, as well as post-office money-orders, and express money-orders. Could there have been more perfect conditions for a successful popular loan?

The more enthusiastic advocates of a popular loan were particularly pleased with those regulations of the Department which provided for receiving subscriptions at post-offices and remittances by post-office money-orders. It is interesting to note that out of the total subscription only $728,000 was received through this channel. Posters were hung up and subscription-blanks distributed to over 20,000 express-offices; for it was believed by some that many people who had not banking connections would avail themselves of this easy means of transmitting money. The total receipts in the shape of express money-orders were but $60,000. There was received through the mails in currency over $731,000. It was not a rare thing to receive a $1,000 bill in an unregistered letter. It is a tribute to the excellence of the mail-service that there was no complaint from this vast army of subscribers of the loss of a currency remittance.

As a matter of fact the subscription illustrates wonderfully well how thoroughly educated are the people of the United States in the use of banking instruments. Over $100,000,000 in checks, drafts, and certificates of deposit were received from subscribers for the $500 and smaller bonds, while the 2-per-cent deposits on the subscriptions for the larger amounts were wholly in the shape of certified checks. About $198,500,000 of the $200,000,000 bonds issued will be paid for by means of bank-paper and certificates of deposit.

Some idea of the detailed work in connection with the issue can be had from some figures of the loan. Subscriptions were received from 320,000 persons. Among these there were 230,000 of individual subscriptions for $500 or less. The subscription was made up roundly as follows:

Individual subscriptions for $500 and less	$101,000,000
" " " amounts larger than $500	358,350,000
Subscriptions of corporations, associations, etc	434,650,000
Syndicate subscriptions	500,000,000
Total	$1,394,000,000

The loan closed at three o'clock of the afternoon of July 14. In less than three hours every corporation subscription was in the mail with a letter of rejection, and every individual subscription for amounts of $50,000 and over was also on its return trip with a similar letter. Seven hours after the subscription closed the Department was able to announce quite accurately where the line would be drawn below which all subscriptions would be allotted. When it is remembered that the name of every subscriber had to be inscribed at least twelve times in the complex process of official book-keeping, the collection of remittances, the mailing of notifications of receipt and allotment, the addressing of envelopes, the making of card-indexes, and in the writing of small checks covering the interest from the receipt of the subscription to August 1 (the date when the bonds began carrying their own interest), some idea of the clerical labor involved may be had.

Allotments were made to practically 300,000 successful subscribers. Multiply that by 12, and recollect that every entry of a name had to have an independent verification, and it will be seen that this writing of 3,600,000 names and addresses was a task of no small proportions. But that takes no account of the work in connection with the $1,200,000,000 subscriptions returned, nor of the vast correspondence resulting from errors in every conceivable form made by subscribers in filling out their blanks and sending their remittances. From the time the

envelopes were dumped from the mail-bags,—a force of twenty people was required to open them,—through all the complicated operations of listing, scheduling, collecting remittances, opening accounts, calculating interest, and, finally, putting up bond and interest-checks and sealing each envelope with five wax seals bearing the imprint of the seal of the Treasury, the work has been performed by a temporary force organized and drilled for this special purpose. The force was employed without regard to Civil-Service rules. Legibility of handwriting and good moral character were the tests imposed. A corps of five hundred clerks has been engaged on the work. For the expenses of the issue, the getting out of circulars, stationery, employing clerical help, engraving and printing bonds, and, finally, paying the express companies for transporting them, Congress has allowed $\frac{1}{10}$ of 1 per cent,—the smallest commission for expenses ever paid by the Government for the floating of any loan.

The sealing of the packages is alone a great task. Five seals are put on each package; and there will be about 300,000 packages; representing a total of about 1,500,000 wax seals. The bonds are delivered by express companies; the Government paying charges, and the companies being pecuniarily responsible for correct delivery.

The permanent work of the Treasury Department will be materially increased by this issue. The addition of such a great number to the total of outstanding bonds will add enormously to the work of making interest payments; the increase in number being far out of proportion to the increase in the outstanding funded debt, because of the small denominations and the widely scattered holdings. It is just as much clerical work to take care of a fifteen-cent coupon which matures every three months on a $20 bond as it is to pay the interest on a $10,000 bond.

The cost of handling a $20 bond makes it a rather expensive security to the Government. But, when looked upon in the broader sense, these $20 bonds are the best form of security the Government has ever issued. The great multiplication of bondholders, which has resulted from the manner in which this loan has been popularized, cannot but be an important factor in the national life. If it were a fact, that each of the 300,000 subscribers was a *bona fide* investor who would hold the Government's security as a permanent investment, the influence of such a distribution of Government obligations would certainly be marked and beneficial. It is altogether too much to say, that all the subscribers to this loan have purchased the bonds with the idea of holding them permanently in their strong-boxes. In any consideration of this phase of

the loan, the fact must not be lost sight of that the bonds were quoted at a marked premium during the whole time the loan was in progress, and that the Government was selling a security at par which the purchaser knew he could resell at an immediate profit. Speculation and not permanent investment, therefore, was to a great extent the moving factor. Undoubtedly the issue will be largely consolidated, and many of the bonds will find their way into the hands of the people who will pay the most for them.

As a general proposition, Government bonds are worth most to national banks, which can use them as a basis for circulation or as security for Government deposits; and that being the case, it naturally follows that a large number of these bonds will find their way into the assets of the national banks. This is no argument against the popular success of the loan, but is merely a factor to be considered in measuring that success.

After every allowance is made, after all the modifying conditions are considered, there still remains the fact that this loan has been a remarkable exhibition of financial strength, of faith in the Government's securities, and of the disposition of the Government to favor in its financial operations people of small means. In this latter respect the response has been everything that could have been expected. Small investors have shown their readiness to deal directly with the Government, and in great numbers have become purchasers of small amounts of bonds. The nation is stronger because of this distribution of its securities. The people are well satisfied, because of the opportunities that have been offered them. Critics of capital have been robbed of some of their much-used illustrations by the remarkably patriotic action of the great financial interests in guaranteeing the success of the loan; and the whole financial world has been enlightened as to the solidity of our institutions by the object-lesson of a 3-per-cent war loan selling in the market at 105 while hostilities were still in progress.

F. A. VANDERLIP.

OUR INTEREST IN THE NEXT CONGRESS OF THE POWERS.

SINCE it is now altogether probable that the Powers will insist upon the submission of certain results of the war to an international congress, a discussion as to what we should demand in such a congress, what power we have to enforce our demands, and whether or not such a congress at this juncture would be to our advantage, may not be untimely.

The enforcement of the one demand, that in future all civilized and semi-civilized countries, conquered or seized by any of the great Powers, remain open to the free trade of all the others, would now be the chief advantage we could derive from an international congress. This provision should include the present shadowy and generally inequitable claims to great portions of territory, called "spheres of influence."

We should seize the occasion to make such a provision a part of the Law of Nations. Our home market, great as it is, can no longer consume the supplies made possible by our enormous powers of production. Our export trade is extending itself by leaps and bounds. The completed figures of the Bureau of Statistics show an increase of $180,300,000 over last year, which was our largest export year on record.

The Continental Powers are constantly restricting the markets for our rapidly developing commerce. Instead of holding conquered or occupied countries for the free trade of all other nations, as England does, these Powers at once surround all such countries with a protective ring-fence, and make it an exclusive market for themselves, regardless of the vested trade-rights of others and of the rights of the people of the conquered countries, who are thus forced to buy inferior articles in dearer markets. Indeed, the oppressive character of Protection is most clearly seen when it is imposed upon a people by external force. It was by such acts on the part of France that England lost valuable rights in Ton-King, and the United States her vested right to a great part of the trade of Madagascar,—a trade three times as large as that of France when the latter took possession of that island. These are international wrongs as yet without international remedies.

Our right to the trade in Madagascar—peacefully acquired, and mu-

tually beneficial to the people of that island and ourselves—was certainly greater than the right of France to the territory, violently taken by war. Russia and Germany, also following the exploded commercial policy of the last century, are shutting us off on the northern coast of Asia from territories which would soon become immense markets for our surplus products. It should be remembered further that the countries which they are closing to our trade are just those in which we should be able to compete most successfully. Countries about to be developed by the Powers of Europe or by ourselves do not require the wine and silks of France, but mining and agricultural implements, steel rails, etc., —commodities in which we can undersell all our competitors.

It is monopoly of trade, not greed for territory, that in nearly all cases impels the Continental Powers to make these aggressions. Russian officials frankly state, as the reason for not annexing a large part of the interior of China, that those districts would not pay even the expense of government. Nine-tenths of the disturbing war talk and war feeling of late years has resulted from disputes concerning the boundaries of these new acquisitions. If the just and equitable principle of *open ports* and *free trade* were made a part of the Law of Nations, the desire to undertake the expense of governing these weaker countries would be materially lessened.

Of late many peace panaceas have been suggested, such as the disbanding of armies, the forming of grand alliances, and international arbitration; but the simple principle of *open trade* would be, during this fight for markets, a more effective measure for universal peace than any other. The general impression that Germany is quite capable of despoiling a European neighbor by the seizure of one of the Philippines, justifies Capt. Mahan's suspicion that, in the *fin de siècle* craze for expansion, South America might not be exempt from the aggression of stronger Powers.

Proximity now counts for little or nothing in trade. It is impossible to find a territory of equal area as far from the United States as Madagascar; yet our trade with the island, before the French occupation, was greater than that of any other country. Our trade with China and Japan is as great as that with Mexico; and in the last two years our Australian cousins have taken almost twice as much of our exports as all our Central American neighbors combined. Pan-Americanism, Bureaus of American Republics, etc., to foster trade in particular localities, are only part of the old Protection fallacy. What we need now is a uniform, world-encircling law of trade. If Free Trade were

a law, it would no longer be necessary for us to consign Spanish Americans to the awful fate of governing themselves; and we could be relieved (especially with our holdings of strategic points in the Caribbean Sea) of that "white elephant" of unknown dimensions, the Monroe Doctrine.

Perhaps there will never come a time when we shall be in a stronger position than now to enforce our demands in an international congress. Our naval strength has startled Europe. England's interests are identical with our own. She is preaching the doctrine of Open Ports, and has shown her willingness to fight for them.

Japan, with her efficient navy and important strategic position, has just been robbed of the fruits of victory by the three Powers who will most strongly oppose us. With Japan to aid the Anglo-Saxon Alliance in diverting a certain amount of naval strength, we could, with the assistance of the naval stations of England in the Mediterranean, bottle up the Black Sea and, perhaps, the Mediterranean itself. With our own western frontier resting on the shores of the Pacific, and with our Hawaiian and Philippine naval stations to coöperate with Japan and the fortunately situated British islands of Hong Kong and Singapore, we could effectually cut off the communications of Europe with the Far East. Indeed, it is a question whether an alliance having so many points of strategic advantage in all parts of the globe could not shut off the continent of Europe from every other part of the world. In either case, all their colonies would fall into our hands. As in the other general wars of modern times,—the War of the Spanish Succession, the Seven Years' War, and the wars of Napoleon,—the sea Power would in the end have the substantial gains.

While the Anglo-Saxon race is to-day the dominant race of the world, those who have seen the immense material development of Russia must admit that at the end of the next quarter-century the relative power and influence of the Anglo-Saxon race will be much diminished. The traveller who takes the Oriental Express at Paris for Constantinople runs down an inclined plane of civilization. On reaching Vienna he feels that he is out of the vein of material progress; at Belgrade he begins to see countries and cities taking on an Eastern look; on the third day he passes through Sophia, the semi-barbarous capital of Bulgaria; and on the fourth he arrives at the filthy capital of the "unspeakable Turk." Few realize that a further short sea voyage of thirty hours brings one into a zone of progress as vigorous as our own. Sebastopol, at the end of the Crimean War a squalid Tartar village, has now, with

its magnificent terraces and quays, the air of a great European seaport. The Crimea itself, known to us, through accounts of the Crimean War, as a mere trackless plain with an Arctic climate, is now fast becoming one of the greatest wine-producing countries in the world. Directly across the Crimean peninsula the plains of the Doneitz, which have slumbered for centuries in isolation and silence broken only by the march of Tartar hordes, have recently taken on an appearance similar to that of the environs of Pittsburg; twenty large factories for the manufacture of agricultural implements being now at work in that locality.

Across the Caucasus, beginning at the eastern shore of the Caspian Sea, Russian engineering has built a railroad over the shifting sands of the Bokhara desert, and from the quagmires of the Oxus to the once mythical city of Samarcand, the capital of Tamerlane, but a few years ago on the limits of the known world, deep in the wilds of Tartary. Over this immense region the same activity of progress can be seen: huge barracks, which in those deserts seem to have risen in the night like a mist, are filled with soldiers, who are being educated in the arts of war with all the military science of Europe. Here the cotton acreage is extending so rapidly that railroads have not kept pace with it; and caravans, sometimes from ten to twenty miles long, are hurrying the crop from all directions to the railroad terminus.

Eastern Siberia also is progressing at almost American speed; and the great plains of Central Siberia, the most extensive on our planet, are only beginning to show the effects of railroad development.

With this immense material progress, with Constantinople a Russian port, with her frontiers resting on the Persian Gulf and the Pacific Ocean, Russia cannot fail to become in the course of twenty-five years a great sea Power which will greatly diminish the influence of the Anglo-Saxon.

Let us, therefore, have a congress now, and demand in it nothing but justice and equality in trade. In such a conference we should be even stronger than in the field.

Nothing has remained further behind in the march of civilization than international law; and as long as the Anglo-Saxon maintains his lead, it is his duty, as well as his interest, to enact the new laws necessary to bring it up to present requirements.

Before the leadership of nations passes from the Anglo-Saxon race, let us impress upon the world those laws so necessary for its progress, and, above all, the one of supreme importance, the law of *free exchange*.

TRUXTUN BEALE.

THE SIGNIFICANCE OF THE OREGON ELECTION.

On June 6, 1898, the people of Oregon held a general election for the purpose of choosing State officers, two Congressmen, and a Legislature which will elect a United States Senator. The election resulted in an overwhelming Republican victory. In November, 1896, Mr. McKinley carried the State by a majority of 2,050. This year the Republicans elected their Governor by a majority of 10,574. Mr. Bryan carried sixteen of the thirty-two counties of Oregon; King, the Fusion candidate for Governor this year, carried but seven; the majority in every case being a meagre one. Three of these seven counties lie in the southeastern corner of the State, along the Idaho and Nevada lines.

The Legislature consists of sixty-six Republicans and twenty-four Opposition. Of the twenty-four three are hold-over Senators; and of the remainder ten were elected in districts carried by the Republican candidate for Governor. In these ten cases the Fusion candidates were elected because of personal considerations or factional differences in the Republican party.

Two years ago in both of Oregon's congressional districts, the Populists and Democrats made separate nominations for Congressmen. In these three-cornered fights the Republican candidates were elected by a plurality of 63 in the First District and of 378 in the Second. This year, against a combined opposition, the Republicans carried the First District by 2,022, and the second by 6,660.

Two years ago, owing to divisions in the Republican party, Sylvester Pennoyer, Ex-Governor of Oregon, and a pronounced Free Silverite, was elected Mayor of Portland. This year, although the same divisions continue and Ex-Senator Mitchell's followers voted and worked with Pennoyer, his candidate for Mayor was defeated by a plurality of 2,897 by W. S. Mason, an original Gold-Standard man, and president of the Portland Chamber of Commerce.

The Republicans have won this victory with practically no campaign fund, and without any assistance from outside the State, except three speakers sent from the East, two of whom reached Oregon when the campaign was almost over. The Republicans were demoralized also by the

manner in which Federal patronage had been distributed. The offices had almost all been parcelled out to the Mitchell, or Silver, faction,—a faction miserably small in number, and thoroughly discredited throughout the State. Many of these office-holders joined with the partisans of Ex-Senator Mitchell and openly antagonized the Republican ticket. The newly appointed Postmaster of Portland, for example, was the manager of a bolting faction of Republicans, who labored persistently to defeat the Republican candidate for Congress in the Second Congressional District, four of the seven candidates on the Republican State ticket (including the Governor), and the ten Republican legislative candidates in Multnomah County.

Opposed to the Republicans was a fusion of the Populist, Democratic, and Silver-Republican parties. It had a considerable campaign fund at its disposal, and was assisted by a large corps of speakers from a distance.

If this were a mere partisan triumph, I would not ask for space in THE FORUM to discuss it. The national significance of the election, however, appears from an examination of the platforms of the contending parties. The three most important planks in each platform were as follows:

FUSION PLATFORM.

We demand the free and unrestricted coinage of silver and gold at the present legal ratio of 16 to 1, without waiting for the consent of foreign nations; and we are unalterably opposed to the policy of the present Republican Administration in demanding the retirement of greenbacks, and the turning over of the money-making power of the Government to the national banks, as presented by the Bill drawn by the Republican Secretary of the Treasury and endorsed by President McKinley; and we especially denounce the avowed attempt by said Bill to fasten the country irrevocably and forever to the single gold standard.

REPUBLICAN PLATFORM.

We are in favor of the maintenance of the present gold standard; we are unqualifiedly opposed to the free coinage of silver and to all other schemes looking to the debasement of the currency and the repudiation of the debt. We believe that the best money in the world is none too good to be assured by the Government to the laborer as the fruit of his toil and to the farmer as the price of his crop. We condemn the continued agitation for free silver, as calculated to jeopardize the prosperity of the country, and to shake the confidence of the people in the maintenance of a wise financial policy; we particularly condemn, as unpatriotic, the efforts of the Free-Silver agitators to array class against class and section against section; we declare that the interests of all classes and of all sections of our country alike demand a sound and stable financial system.

FUSION PLATFORM.	REPUBLICAN PLATFORM.
We demand that there shall be no further issue of United States interest-bearing bonds.	While we deplore the imminence of war, we recognize that the country is on the eve of a war undertaken for the vindication of the national honor and the performance of a work dictated by every instinct of humanity; we declare that the Administration is entitled in this conflict to the confidence and support of the entire people.
We demand the initiative and referendum system of lawmaking in its optional form, local, State, and national, and the submission by Congress of all important national questions for an advisory vote of the people, until such time as the national Constitution shall have been so amended as to provide for direct legislation.	We are firmly attached to the principles of the Federal Constitution; we recognize that representative government is one of these principles; and we are opposed to any change in law or Constitution which will abrogate this time-honored principle.

The Money Question was undoubtedly the paramount issue of the campaign. It was discussed in nearly every political speech, and emphasized by the press of the entire State. The speaking campaign was not confined to the large towns, but, on the contrary, embraced the hamlets and school-houses, and the country remote from the railway lines. Mr. Geer, the Republican candidate for Governor, traversed the so-called "cow" counties of Southern Oregon and Eastern Oregon; travelling more than a thousand miles by stage and private conveyance. Wherever he went he expounded the Money Question from a Republican standpoint—always to large audiences. Prosperity had visited the State, especially in the farming and grazing districts; and the people were ready to examine the Money Question dispassionately. The result of the election is an overwhelming condemnation of free silver. Silver will never again be an issue to win on in Oregon.

Second only to the Money Question in importance was the duty which the voters felt of upholding the Administration in the Spanish War. The Fusion platform was an endorsement of the United States Senators who refused to give the Administration the power to borrow money. The people understood that without this power the war could not be successfully prosecuted; and their vote is an overwhelming condemnation of the Copperheadism of 1898.

The issue joined with the Fusionists on their declaration for the initiative and referendum was not much discussed during the campaign.

It was important chiefly as indicating that the Republicans of Oregon had finished their efforts to beat Populism by crowding it off its own platform. The day of deception and cowardice had passed: the day of honesty and courage had come.

Two years ago such a declaration was not made and could not have been made. Two years ago the Republican State Convention defeated a resolution to incorporate in the platform a declaration condemning free silver, although then, as now, the Republicans of Oregon were nearly unanimous in their support of the gold standard. The consequence was that in 1896 the party narrowly escaped defeat. This year, on a pronounced Gold-Standard platform, the most decisive Republican victory in the history of the State has been won. It is a demonstration of the fact that in politics the manly, honest, courageous course is also the politic course. The demonstration is commended to the consideration of the Republicans of Ohio and Illinois, who have contented themselves with platforms of platitudes on the Money Question; merely affirming the platform of the last Republican National Convention. In Ohio, indeed, they did not even quote the 1896 platform, but contented themselves with a reference to it. Oregon, be it remembered, is a mining State in the silver-belt.

The Oregon campaign illustrates the folly of trying to fuse the Democratic and Populist parties on the Silver Question. The principles of government, for the maintenance of which these parties were formed, are diametrically opposed to each other. Until the Presidential campaign of 1896 Democrats and Populists were engaged in bitter denunciation of each other. Until that time Free Silver had never been a portion of the creed of the National Democratic party, and it had been only an incident in the Populist creed.

These facts were fresh in the minds of the Oregon voters; and they were vigorously emphasized on the stump. They served to show that the fusion was an alliance for office and revenue only. Many conscientious men in both these parties revolted. An independent Populist candidate for Governor polled 2,866 votes; many more Populists refused to vote at all; and some Populists and many Democrats voted the Republican ticket. It is safe to say that these two parties will never again fuse in Oregon on a State ticket.

In a word, the Oregon election is an emphatic endorsement of sound money and honesty,—an emphatic condemnation of Copperheadism and of the sacrifice of principle for the sake of office.

WALLACE MCCAMANT.

THE PILGRIMAGE TO THE KLONDYKE AND ITS OUTCOME.

HAVING recently returned from Dawson, I have been asked by the Editor of THE FORUM to state my unbiassed opinion with respect to the conditions existing in the Klondyke, and as to the probable outcome of the rush to the gold-fields of that district.

In order to appreciate fully the situation in the Yukon district last winter, and upon the arrival in May and June of this year of the great pilgrimage of gold-seekers, it is necessary to be familiar with the main points of the history of placer mining in Alaska and in British Northwest Territory.

The occupants of the old, widely separated trading-posts of the Yukon had long known of the existence of gold in small quantities in the Yukon Valley; and through them came the information which, in the evolution of events, led to the discovery of the rich fields in the Klondyke mining district. As far as I can ascertain, it was about eighteen years ago that the first actual prospectors packed their supplies over the coast range of Southeastern Alaska, built boats on Lake Linderman or Lake Bennett, and, armed with "faith and a gold-pan," crossed the unexplored Lewes lakes, and floated down the Lewes and Yukon rivers. They prospected the bars of the rivers, and found—on the bars of Stewart, principally—"diggings," where from $5 to $20 could be washed out of the gravel in a day. In September, arduously poling their boats back up-stream, they returned with the product of two or three months' labor. Later, they ceased to return in the same season, and built cabins for their protection during the winter. A trading company, whose river steamers connected at the island of St. Michael in the Bering Sea with ocean steamers from San Francisco, undertook to supply them with outfits of food, utensils, and clothing. Usually, they could earn the price of an outfit and a little more in two or three months' work in summer; and when they could not, the trading companies gave them credit until they should have better luck.

After working the bars, the next progressive step was the more prof-

itable working of the frozen ground in the valleys of the tributaries of Forty Mile Creek. This was done by alternately removing a few inches of thawed dirt and then allowing the sun to thaw a few inches more. But this process was feasible only in summer, and when the pay-dirt was near the surface and the contour of the ground favorable. In going to any depth the hole was sure to fill with water from the seepage of the thawing mud.

About five years ago fires were for the first time used in winter to sink holes to pay-dirt. Then the pay-dirt was drifted out by means of fire—the freezing temperature removing the danger of water running in—and drawn by a windlass to the surface, where it was piled, to be thawed again by the sun in summer and to be sluiced with the spring freshet. There is some dispute as to the author of this important innovation, which enabled the miners of the Yukon to work during twelve instead of only three months in the year. It is certain, however, that the idea was first suggested by the successful experiment of using fires to thaw the dirt of summer diggings which the rays of the sun did not reach. And, fortunately, firewood is as plentiful in the valley of the Yukon as mosquitoes in summer or ice in winter.

Gradually the number of miners increased. The new-comers came, as a rule, on the advice of friends who had gone before them. In the winter of 1895–96 there were probably two thousand white men in the valley who lived by placer mining. Up to this time the largest amount taken out of a single claim had been $75,000. Circle City, three hundred miles below the then site of Dawson, and in American territory, had become a more populous camp than Forty Mile. Here, as a result of the finds on the tributaries of Birch Creek, were some three hundred cabins, a United States post-office, and a United States Commissioner.

It was in 1896 that the Yukoners learned through George Cormack—nicknamed, on account of his tastes, "Siawash George"—of the discovery which was to make the Klondyke so famous. Cormack was something of a trader and something of a prospector,—a product of the country. He had an Indian wife, and associated with the Indians by preference. In August, 1896, while he was fishing in the Klondyke, his brother-in-law brought him some small nuggets of gold that he had found on a bench ten miles up Bonanza Creek, which flows into the Klondyke about three miles from its mouth. On making a personal investigation, Cormack was so well satisfied with what he saw that both he and his brother-in-law staked claims.

The miners of Forty Mile and Circle City, except those who had

the ill luck to be sceptical, or out prospecting, hastened to the scene of the new "strike." When Bonanza was completely staked out, they staked Eldorado, a small creek emptying into Bonanza half a mile above the discovery claim. Of Eldorado before it was prospected, however, everybody had had a poor opinion. Holes sunk early in the winter showed Bonanza, from the discovery claim to its source, to be far richer than any creek of the old "diggings," and that for its length Eldorado was the richest creek that the world had ever known.

Before this, a well-known character had staked out the town-site of Dawson on the flat at the junction of the Klondyke and the Yukon. He received $5 for lots that sold last spring for $15,000. Circle City and Forty Mile were deserted; and practically the whole white population of the valley spent the winter in Dawson. In the first winter, something over $2,000,000 was taken out of Bonanza and Eldorado. The output of one Eldorado claim alone was $250,000.

This, then, was the crowning result of the years of labor of the pioneers. If the discovery of Eldorado and Bonanza was an accident, it was none the less an accident whose fruitful results were due wholly to the presence of miners in the country. Cormack had told his friends to let him know if they ever found any gold. All prospectors courted the favor of the Indians, with this same end in view. Unless the discoverers had known of the process of thawing, and its possibilities, they would never have reached bed-rock, where the wealth of the creeks lies, at a depth of from twenty-eight to thirty-five feet. Paying dirt at the point of discovery happened to be on a bench and only a few square feet in extent. Having worked this out, the miner of an early stage of the country's development might have tried in vain at other places on the bench and have given up the pursuit. But, knowing the process of thawing the ground, Cormack was wise in the interest of his own claims to have as many holes sunk to bed-rock as possible, and thus to ascertain the richness and extent of the pay-streak. So he did not hesitate to spread the news.

Never before had the prospector worked under such fierce and exacting surroundings. In the "land of magnificent distances" he had to move forward at a snail's pace under the most adverse climatic conditions. Of the extremes of temperature in the Yukon Valley I may say that ten days before the ice went out of the River I found the mercury to stand at 15° below zero at 3 A.M., when we started out on our day's journey, and by noon to be at 80°. For five months in winter the cold ranges from 20° to 50° below zero. Prospecting with a pack

on one's back is done only in September. In midsummer, except on a beaten trail, one sinks deep into the mud; the mosquitoes are uncomfortable, to say the least; there is no darkness; and, at midday, when the heat makes travel unadvisable, and sleep difficult, the mercury often rises to 100°.

I should not call these first prospectors soldiers of fortune, but rather the generals of their own little fortunes. They did not go to the Yukon expecting to make a fortune by enduring the cold of one Arctic winter, but only to make a living and to follow their bent. By nature they were recluses from civilization, who were happy in being in the company of other recluses in a country quite shut out from the world for eight months in the year. They had the patience necessary to the time-consuming business of prospecting for placer mines in Alaska.

Passengers on the steamers leaving Dawson in the spring following the great discovery had with them material proof of their good fortune. When, on July 15, the first ocean steamer connecting with the river steamers at St. Michael arrived at Seattle, men who had been penniless a year before went down the gangplank with sacks of gold so heavy that they needed assistance to carry them. The details of the successes of the most fortunate were borne to all parts of the Anglo-Saxon world by telegraph. Newspaperdom was quick to see the interest which must be excited by the announcement that near the Arctic Circle, in a region inaccessible for eight months in the year, were creeks where a poor man, if he could but reach them, might stake out a fortune for himself.

The prevalence of commercial depression heightened the fever. Men of all occupations from the cities, towns, and villages of the Eastern and the Middle States began to make preparations for departure. All were confident; some so confident that they borrowed money, took their savings, or mortgaged their homes, to secure the necessary funds. In many instances they left families behind. Reliable men from the Klondyke again and again expatiated on the difficulties of locating paying ground and of working it. The pilgrims were convinced that the difficulties before them were only the difficulties of the trail. These seemed to exert the fascination that adventure and danger always do over a certain class; being an invitation to a test of physical prowess and endurance which each pilgrim felt himself to possess in a larger degree than the average person. Prospectuses of the Pacific Coast steamship companies, of transcontinental railway companies, and of the towns on the Pacific Coast whose merchants had Yukon outfits to sell, abounded with alluring pictures.

There are two practicable routes to the Klondyke. One is by ocean steamer to the island of St. Michael in Norton Sound, and thence by a river steamer. The other is by ocean steamer to Dyea or Skaguay on the southeastern coast, and thence over the Chilkoot or the White Pass to Lake Linderman, where a small boat may sail across the lakes and float down the Yukon River until drawn up on the bank in front of Dawson. Between the middle of October and the first of November the River becomes impassable on account of the running ice. This rises from the bottom, which freezes before the surface.

Perhaps fifteen thousand men, who were able to leave home at once, decided to make the attempt to reach Dawson before the winter of 1897–98 should set in. This would have been easy enough, but for the transportation of supplies of food, clothing, and utensils sufficient for at least eight months, which had to go with the pilgrim. The passes were soon the scene of a tumult of energy. Either the pilgrim must carry his own outfit thirty-four miles and up an ascent of 3,400 feet, or else hire someone to do it for him. The price of transportation over this distance became as high as $1.50 a pound. There sprang up at the mouths of the Dyea and the Skaguay rivers, which empty into either arm of the Lynn Canal, crude, lawless, mushroom towns, whose inhabitants had failed to get over the passes, or belonged to that shifting, disorderly element which is ever seeking new pastures, and had not the force of character necessary to attempt the journey to Dawson at that time of year. Of the two or three thousand men who succeeded in going through, only a few had food enough to last them until spring. But Dawson had other residents who were in the same plight. The two commercial companies were unprepared to deal with the rush of orders for outfits. Their flotilla was no larger than when they had to feed smaller camps; and Dawson was three hundred miles, —or, four or five days' journey for the steamers against the strong current up the River—farther from St. Michael than Circle City. Moreover, toward the close of navigation in the autumn of 1897 the water was unusually low. Much in the way of supplies to relieve the situation was expected from the last steamer to come up the river, the "Bella." When the "Bella" arrived with scarcely any provisions, the outlook was threatening. On the part of more than a thousand of the lawless and improvident ones who had no food there was talk of raiding the company stores; in fact, of making those who had yield up to those who had not.

Fortunately, there was then in Dawson a courageous and sensible

man, Capt. Charles Constantine, of the Canadian Northwest Mounted Police. In the work of preserving order, at least, he was not hampered by the time-serving civil officers which the Government sent to Dawson,—for the purpose, it would seem, of individual aggrandizement. He had only twenty men with him; but so ably did he deal with the situation that the would-be rioters were cowed without any bloodshed. Then he let it be known, in a manner which admitted of little argument, that those who had no food must go down the River to Circle City, where there was food. Capt. Hansen, of the Alaska Commercial Company, gave free passage on the "Bella" to Circle City; and between two and three hundred were persuaded to take advantage of the offer. But those with ample funds began to hoard food as gold is hoarded in a financial panic. A sack of flour was known to sell as high as $100; and $1.50 a pound was the prevailing price for all staples. The newcomers who had only part of an outfit saw that they would not have enough money to complete their outfit later in the winter, even if food were purchasable. In December, January, February, and March some nine hundred men left Dawson for the outside. In the depth of winter they walked six hundred miles over the ice of the River and the lakes to the coast; their provisions for the journey being drawn by dogs or by hand.

Thus Dawson was saved from famine from within, which was possible; not from without, which was impracticable. Our Government's Relief Expedition was not needed; and it could not have achieved its object with reindeer, nor, above all, with the snow- and ice-locomotives, which were the hobby of our Secretary of War. The supplies, with the officers and troops in charge of them, were two months at Dyea waiting for the snow-locomotives and the reindeer. The snow-locomotives never came; and the reindeer arrived when the season was too far advanced for travel, even with dog-teams.

It is now estimated in all that at least a hundred thousand men started for the Klondyke during the eleven months following the public announcement of the discovery on Bonanza Creek. Of these, thirty thousand actually reached Dawson. The remainder gave up the battle, either at Seattle, Dyea, or Skaguay, or even after they had freighted and packed their outfits with such trying labor to the head of the lakes.

I spent two weeks at Seattle in February and March of the present year. Then, with a dog-team to carry my provisions, I tramped five hundred and seventy-five miles over the ice of the Lewes lakes and the Yukon River (by the route the Government Expedition was to have

taken); reaching Dawson on May 4, four days before the ice went out of the River, and nine days before the first boat arrived from the foot of the lakes. Thus I was enabled to be with the pilgrims during the height of the rush over the land trail, and to be in Dawson at the beginning of the "clean-up" and before the thirty thousand arrived. In March there were five thousand people at Dyea, ten thousand at Skaguay, and twenty thousand encamped between these towns and the lakes. Most of them had no dogs, and drew their own outfits on sleds as far as the summit of the pass. This alone, if he had the required eleven hundred pounds of food, occupied the pilgrim four weeks. Seven days, perhaps two weeks, were spent in packing the outfit on his back over the summit of the pass, and from two to four weeks more in drawing it on his sled to Lake Bennett. At Bennett he had to fell timber, saw it into boards, out of which—by the aid of oakum and pitch and the simple tools for the purpose, which were a part of his outfit—he built his boat.

Such was the experience of those who started with the minimum amount of capital, $500. The labor was that of stevedores. It was performed in a trying climate, and sometimes in the terrible storms which rage on the mountain summits of Southeastern Alaska in the winter. Two-thirds of the $500 were expended for the supplies needful for a year's stay in the Yukon Valley, and the rest, after reserving $50 for emergencies, in railway and steamer fares. One hundred thousand men expending $500 apiece represent a total outlay of $50,000,000 in the chase of gold by the pilgrimage. But many had more capital than this, and could afford to buy dogs and to have their outfits packed over the worst parts of the trail.

Such of the pilgrims as had the time, and were either ambitious to precede the mass of the pilgrimage into Dawson or had a stock of goods to sell to the miners, transported their *impedimenta* to the foot of Lake Le Barge, the last of the Lewes chain. By building their boats there they could launch them in the River; saving a difference in time of some two or three weeks between the opening of the River and the lakes.

By July 1 all the pilgrims, except a few stragglers, had reached their destination. To their lately acquired trades of cook and boat-builder they had now added that of the navigator. With them came tales of mosquitoes, delays on sand-bars, and of more than one craft with outfits on board which had been sunk by the rocks of White Horse Rapids and Thirty Mile River. Their unprecedented flotilla lined the banks of the Yukon and the Klondyke for several miles. They put up their tents as near as possible to the cluster of log cabins which is

called a "town" throughout the region, until the log cabins were surrounded and the mountain-side was dotted with tents. In the main street booths sprang up for the sale of the goods which came down in the early boats; and those pilgrims who brought merchandise, almost without exception, found their enterprise profitable. The early boats did not find Dawson starving; but they found Dawson with few luxuries in the way of food, and in want of many articles of clothing needful for the summer season. The miners were willing to pay from $12 to $18 a dozen for eggs of doubtful age, $1.25 a pound for sugar, $2.50 a pound for butter, $1.50 a can for condensed milk, $1 a pound for canned goods, $8.00 a pound for tobacco, $15 for a pair of boots or shoes selling for $2 outside, and $25 for a broad-brimmed felt hat. These prices were not maintained long after the boats began to arrive in any numbers. Later, when the pilgrims, with a view to departure, began to sell their outfits freely, flour sold for $5 a sack,—the lowest price ever known in the Yukon Valley. But luxuries sold for relatively a great deal more.

In February Major J. M. Walsh, the Commissioner for the Yukon district, issued an order that no one should be allowed to enter the district with less than 1,095 pounds of food,—enough to last him for a year. Otherwise a great portion of the pilgrims would have reached Dawson without food enough to last them six months. In order to bring their outfits up to the required weight they bought mostly flour; while originally, when purchasing their outfits, they had contented themselves with only a few articles of luxury, because the staples were cheaper and more portable. But in Alaska dried fruits, sugar, evaporated vegetables, and canned goods of all kinds are absolutely necessary. Every man of my own party, while undergoing the extreme labor of the trail, consumed two-thirds of a pound of chocolate and sugar a day. Such knowledge which the prospector had gained by practical experience made him recall with some bitterness that he had himself encouraged the merchants to vie with each other in offering cheap outfits of the statutory weight for a "lump sum." Accordingly, in the stocks of provisions piled in the boats which came down the River there were few luxuries remaining. Many pilgrims had eaten all their sugar and smoked all their tobacco, though they were supposed, officially, to have enough sugar and tobacco left to last them for eight months longer.

The thirty thousand walked up and down the main street slowly, as a crowd moves, or lay in their tents, or cooked their meals. They were feeling the full debilitating effect of the brief, hot summer of the Yukon

Valley—the unhealthiest season of the year. The muck of the town-site was reeking with bad odors; and the hospital was full. There was not one hour of darkness in the twenty-four.

At the time of the arrival of the pilgrimage great depression existed in Dawson. For one thing, there was doubt as to the outcome of the many enterprises which, with more or less capital, were bustling one another. In the main, the depression was due to the failure of a great part of Bonanza Creek to come up to expectations when the dumps were washed; to the collection by the Canadian Government of a royalty of 10 per cent on the output of all claims; and to the natural reaction from the inflation of values during the winter. In January a conservative estimate of the output of the season was $15,000,000. Then it was thought that the royalty would not be collected; and claim-owners were inclined to exaggerate, rather than to minimize, the amount which they expected to "clean up." In early June, when the "clean-up" was well under way, the Government estimated the output for the season at $6,000,000. But claim-owners, it is suspected, did not always make a full return of their output; and, moreover, it seemed to be an open secret that the civil officials were open to bargains. The amount of the actual output will never be known; but my belief is that it was not more than $10,000,000,—probably less.

There is a mountain which stands alone at the summit of the watershed between the Klondyke and the Indian rivers: the miners refer to it as "The Dome." Of the five creeks in this district which have been proved rich, four—Bonanza, Sulphur, Dominion, and Hunker—have their origin in rivulets flowing down the sides of this mountain; and the fifth, Eldorado, the richest of all, which is only five miles long, is a tributary of Bonanza. Sulphur and Dominion belong to the Indian River, and Bonanza and Hunker to the Klondyke watershed. Not more than a score of claims were worked to any extent on Hunker, Sulphur, and Dominion during the winter of 1897–98; but this was enough to demonstrate that Sulphur and Dominion, hitherto little prospected, nevertheless possessed "good pay," if not as rich pay as Eldorado or Upper Bonanza. All the claims were staked by men who were either in the region or had started for the region before the treasure-ship, whose wealth and whose story startled the world, arrived at Seattle. Of the rush that followed this event, and of the fortunate few that reached Dawson in the autumn of 1897, I learned up to the time of my departure from Dawson (June 24) of no one who had staked a claim of a speculative value of more, or who had made more, than a Klondyke

laborer's winter's wages, unless he had had capital for speculation or had turned his attention to trade. The owners of the best claims on all of the five creeks had been in the country from two to five years. Five years in all will be required to work out most of these claims. There are on Eldorado probably five claims which will yield $800,000 or $900,000 each; probably ten claims which will yield as much as $750,000 each; and on Eldorado and Bonanza probably forty claims which will yield as much as $500,000 each. Such is the concrete glory of the Klondyke! But from this glory must be subtracted—expenses! Labor cost $1.50 an hour last winter. For the sawn lumber for flumes and sluice-boxes the claim-owners paid from $200 to $450 a thousand feet. The cost of working the best claims on Eldorado, inclusive of royalty, varied from one-fourth to one-third of the output.

Up to June 15, 1898, eight thousand five hundred claims had been recorded in the Klondyke and the Indian River mining districts, or two claims for every white inhabitant of these districts during the winter of 1897–98. (The law allows a person to stake one creek-claim and one bench-claim in each mining district.) Of these eight thousand five hundred claims not more than eight hundred had yet been proved, by the actual prospecting of the claim itself or of the creek on which the claim is located, to be worth the recording fee of $15. All might be Eldorados and—all might not. Proximity of a creek to a rich creek does not mean that the former also is rich. All the creeks within fifteen to forty miles of "The Dome" have been staked in stampedes started on haphazard rumors of someone having found "color" in them. These claims must have three months' work done on them this winter; else they will revert to the Government. Some of them will no doubt be forfeited; but enough will be prospected to inform us of the value of most of the numerous new creeks.

It having been found that there were small patches of good pay on the hillsides above Eldorado and Bonanza, the hillsides of the five rich creeks have been staked as benches. A bench-claim is one hundred feet square. The richest bench is French Gulch on Eldorado. Here, on a score of claims, two men with a rocker can take out from $50 to $500 a day. Just beyond the rim of the little basin, which seems to have caught the gold when it was in movement, there is no pay whatsoever. But the hillside was staked for a quarter of a mile beyond the rim before this was known.

If the pilgrim would have a good claim, he must discover it. He must choose some tributary of the Yukon in September, carry his pro-

visions up to the mouth of one of its branches, and spend the winter thawing holes in search of "pay," which, the chances are, he will not find. If he finds pay—or if he does not, but rumor says that he has found it—all the creeks in the neighborhood will be staked in a stampede from Dawson. Or the pilgrim can become one of the loiterers in Dawson who wait for opportunities to go on a stampede. Or he may go to work for wages. Up to July of the present year only a few had sought employment; but these were enough to bring wages down to $1 an hour. Should any number of the pilgrims follow this example, wages are likely to fall to 50 or 60 cents an hour.

Roughly, but surely and swiftly, the lesson was forced home to the pilgrim that the Klondyke is no place in which to make a fortune in a great hurry. However easily one may learn to pan "color" out of gravel, one cannot acquire in a day the characteristics of patience and nonchalance and success in dealing with obstacles which, with the veteran prospector, are as much a matter of experience as of natural fitness. Therefore, most of the pilgrims have started for home, sadder and wiser men, to seek their old vocations. They have done Dawson the favor of preventing a food famine this winter. The hardy few who remain behind will, no doubt, discover new "diggings"; and some of them will secure the fortunes to which their efforts surely entitle them. A part of those who will spend the winter in actual prospecting will go up the tributaries of the Stewart River in Northwest Territory. The remainder—the greater part—will go into American territory. The future of Alaska as a great gold-producing country seems assured, if the finding of "color" at the mouths of the tributaries of the Yukon means, as in the case of Forty Mile, the Klondyke, and Birch Creek, coarser gold in greater quantity on the smaller creeks.

The new trading companies promise cheaper food and cheaper transportation; and the railroad being built from Skaguay to Lake Bennett will make such freight rates from the coast to the lakes as will render the struggles of the packers of the winter of 1897–98 a memory. Capital, skill, and machinery will soon combine to work with profit ground which, under present conditions, does not receive more than passing notice.

FREDERICK PALMER.

THE COURSE OF HUMAN DEVELOPMENT.

DEFINITE knowledge began with mineral substances, passed to vegetal and animal bodies, and is now extending to mankind. With each advance, recognition of the uniformity of nature has grown clearer, appreciation of force and sequence has grown stronger. In every stage knowledge is summarized in classifications; and, with growing recognition of uniform action and sequence, the classifications of science express more and more fully what things *do* rather than what they merely *are*. The extension of these kinetic classifications to mankind is one of the latest advances of science.

Modern instances in human development raise the question as to the superiority of the Caucasian race. Yea more, they raise a doubt as to the utility of race classification for purposes of statecraft and scientific study, a doubt only strengthened when ethnology is compared with other branches of knowledge in which, as I have said, things are classified by what they do rather than by what they merely are.

For example, judged by successful administration, Porfirio Diaz, President of the Republic of Mexico, is one of the ablest leaders of our time, if not of history. Diaz is half Indian, half Spanish; two-fifths of his people are pure Indians; and nearly one-half are Mestizos. Next to Mexico, the nation of most rapid progress during the last quarter-century is Japan, an island empire peopled and ruled by a Mongol race. Again, a minor nation among the Powers, though highly significant in its advance above ancestral standards, is the "Black Republic" of Haiti, whose people are of nearly pure African blood.

The question thus raised is only emphasized by the relative, if not absolute, decadence during recent years of certain Southern European nations.

There are numerous other instances, all of like tenor; and within two decades the question and doubt raised by each have grown into the certainty that mankind is worthy of a classification better than that borrowed from the beasts, namely, a classification in terms of essentially human attributes. This certainty has given form to a new ethnology, in

which men are arranged, not by color, form of skull, and type of hair, but by their activities and capabilities as intelligent beings.

The scientific study of mankind begins with the observations and half-conscious generalizations of the average man. As these are refined and extended, and compared with the simpler facts of the animal, vegetal, and mineral realms, the student gradually gains fixed conceptions concerning individual birth and growth and death, and comes to realize that these facts, like those of the lower realms, are controlled by the law of the uniformity of nature. The realization may be slow: but it is sure; and it matures in conviction no less steadfast than that of the astronomer who predicts eclipses out of his established knowledge that this is a universe of law, and not of chance.

A second stage of the study begins where historiography ends: the student observes not merely that tribes and cities and nations arise and pass, but that every episode in the procession of events is shaped by definite factors, one (and the most variable) of which is human conduct. Regarding the feelings and actions of men toward their fellows as causes and conditions, he realizes that the fate of nations is subject to the law of the uniformity of nature,—that given cause is invariably followed by commensurate effect, and that the movements of peoples may be previsedwith a degree of certainty varying inversely with the complexity of the causes and conditions involved. Guided by the invariable sequence of cause and effect in human affairs, he next perceives that conduct itself is a product of natural conditions coupled with an intelligence which seems to move in accord with invariable law; and thus he grows into realization of the fact that conduct and its consequences—whether reward or penalty—pursue a course no less definite than the revolution of planets and satellites in their orbits as they follow the sun in his dizzying race toward Alpha Lyræ.

There is a third stage in the scientific study of humanity, which arises when the view is extended from individual men, through the social groups, to the races and peoples of the world. Regarding mankind in the light of experience and organized knowledge, the student perceives certain tendencies and laws of development which, virtually immutable, are measurably susceptible of modification by human agency for human weal. The interrelations between man and man, between each social group and its neighbors, between race and race, and between all of these and their subhuman environment, are numberless and so infinitely varied as to challenge prevision; yet, when it is once recognized that every relation is controlled by the law of the uniformity of

nature, and that every movement forms part of a definite sequence, the chaos can be reduced to at least partial order. This reduction is the business of the anthropologist. Tracing the course of human development through the study of many peoples, he is able to lay down the lines of progress; he sees the bustling body of humanity no longer as a wind-tossed lake, but as a strong river flowing steadily in a single direction; and, by projecting the generalizations of experience under the guidance of the formula of science, he is able to prolong a little way into the future the lines coming out of the past into the present.

The study of human progress is of great and growing interest. As his view grows clear, and his horizon expands, the modern student is forced to the conviction that, with far deeper meaning than Pope e'er dreamed of,

"The proper study of mankind is man"

—that the course of human development is the worthiest subject of contemplation our universe affords.

As the interest is profound, so the problems presented are vast in magnitude and practical importance. In round figures the population of the globe is 1,500,000,000. About three-fifths of this aggregate are civilized or enlightened, and limited in permanent habitation to perhaps one-fifth of the area of the continents and islands; about three-tenths of the whole are barbarians, occupying some two-fifths of the lands of the globe; while about one-tenth of mankind are savages, wandering over the remaining two-fifths of the land. These values may be varied by differences in definition; but it is impossible to vary them so widely as to change the broad fact that only a fraction of the earth is completely controlled by civilized and enlightened men for the benefit of their kind.

Partly because of inherent interest, partly to prepare the way for prevision of future progress, it is worth while to define the primary classes of mankind and the stages of human development.

Man differs fundamentally from the lower animals in that he is essentially a social being, and in that his kind are organized in persistent groups (families, tribes, confederacies, states, nations, alliances), developed and perpetuated for the common good. The unit of zoölogy is the individual organism, and the collectives are species and genera, or faunas; while the unit of anthropology (or demonomy) is the group, and the collectives are larger groups and races, or mankind in general. This distinction cannot be too strongly impressed. Between mankind

and the lower animals there are many resemblances and many differences; but the essential difference is found in the social organization of mankind—an organization toward which the highest intelligence of every generation is bent.

Among the races and peoples of the earth two primary types of social organization are found. The lower peoples are organized in tribes and confederacies based on kinship; while the higher are organized in states and nations largely on a territorial basis. These types have been distinguished—notably by Powell—as *tribal society* and *national society*.

When the primary types of social organization are studied critically among the known races and peoples, it is found that they comprise four well-defined social phases, conveniently distinguished as savagery, barbarism, civilization, and enlightenment. The first two phases represent tribal society; the others, national society. All are represented among living peoples, and may be defined with considerable accuracy.

In *savagery* men are united in clans and tribes, usually small, and commonly inimical to neighboring tribes; and, under the cruel teaching of strife and precarious livelihood, low value is placed on human life. The arts are rudimentary; the industries are simple and crude, the implements being chiefly of tooth, shell, bone, wood, and stone; the costumes are scanty and either of skins or of coarse textiles twisted and netted; and the habitations are either temporary bowers or portable tents of bark or skin. Each tribe is dominated by a leader distinguished for prowess or shrewdness. Language is commonly peculiar to the tribe, or to a small group of tribes separate in time of peace, but united in war; while the mythology, or religion, is but a vague reverence for uncanny or mysterious powers, imputed chiefly to animate, but partly to inanimate, things. These characteristics vary slightly from race to race, and some of them extend into higher stages; but there is one feature which is fundamental, and serves to define the stage of savagery, viz., descent is reckoned in the female line, and the control over the family and larger groups inheres not in the fathers, but in the uncles. This stage of society is called maternal from the mode of reckoning kinship, or matronymic from the mode of applying names; or it may be called avuncular from the form of family government. Some of the customs of this stage are closely akin to those found among gorillas and other animals living in family groups, though the essential characteristics are distinctively human.

In *barbarism* men are combined in tribes, usually occupying definite localities if sedentary, or traversing definite lines if nomadic.

Taught by the exigencies of tribal history, a higher value is placed on human life than among savages; and intertribal rights are recognized more or less clearly. The æsthetic arts are inchoate and connected with symbolism. The industries remain crude; unstudied agriculture and the domestication of animals are practised; metal is sometimes forged, but seldom smelted; the costumes subserve growing pudency as well as comfort, and are largely of woollen and cotton or other vegetal fabrics, spun and knit or woven; the habitations are tents among the nomads, and rude castles of stone or sun-dried earth, or logs, among the sedentary tribes; and usually the tents or more permanent structures are so arranged as to express the tribal organization. Each group is controlled by a leader of at least partial hereditary right, usually the tribal patriarch (though the consanguinity and age may be assumed rather than actual), who may be a monarch of unlimited powers. The language is composite and common to a number of tribes; while the mythology resides in a hierarchy of beast-gods and deified objects and powers of nature, sometimes symbolized in dragons and chimeras, or in anthropomorphic monstrosities; the forms of worship are ceremonial, and usually conducted in temples or sacred plazas. The essential and characteristic features of the stage are the reckoning of descent in the male line and the patriarchal control. The society is commonly called paternal or patronymic. It is also called patriarchal, and carries a complementary matriarchal element, — seldom recognized hitherto, — when the spouse of the leader acts as vice-regent.

In *civilization* men are combined in cities and states or nations controlled by laws for the protection of life and property. In this stage the fine arts are divorced from mythic symbolism; the industries are differentiated; division of labor is established; and commerce is developed. The masses are governed by kings and emperors, whose powers, at first limited only by might, are gradually regulated by legislative and judicative tribunals. The languages are blends of those of numerous ancestral tribes, and are crystallized by writing and printing; the beliefs are blent and spiritualized, and monotheism prevails. The characteristics of civilization are many; but the essential feature is social organization on the basis of property right, especially in lands.

The rise of *enlightenment* is current history. The rights of man and the value of life are more and more fully recognized; war is deprecated, and the nations are forming alliances; the remaining feudal lords, kings, and emperors ruling by hereditary right are passing under the dominion of the same humanitarian law as that of the multitude; monarchism is

being limited or transformed into republicanism; and subjects are becoming citizens. Under the protection of beneficent laws population is increasing, and new industries and enterprises are arising to sustain it; the fine arts are cultivated and brought within reach of all; language is unified to a few convergent branches; ideas are diffused and perpetuated by the press; the nations and alliances are moved by charity and controlled by justice; and human life is lengthened. With the multiplication of interests, property right is recognized not only in lands and their produce, but in the waters, in the air above, in the rocks beneath, and, above all, in ideas and opinions. The characteristics of enlightenment are innumerable; but the essential feature is recognition of individual rights, especially of those intellectual rights whereby invention is encouraged and genius fostered, and of the concomitant political rights maturing in government by the people for the people.

To these four phases belong mankind, whether their skins be black, red, yellow, or white; their hair kinked, straight, or wavy. Most of the black and red belong to the first and second phases in about equal proportions; most of the yellow to the second and third; and nearly all of the white to the third and fourth. Yet it cannot be affirmed too emphatically or too often that the individual characteristics are determined less by racial affinity than by social phase, less by color than by culture, less by blood than by brain. Race distinctions are of use to the student; but still more important to the scientist and the statesman are the distinctions in social phase,—distinctions that at once express intellectual development, and control the character and capacity of the individuals who shape the fate of nations.

The four culture phases exhibited by the races and peoples of the earth fall into stages so related as to show that one has grown out of another in a definite order. This order of development is indicated by the observations recorded in current history, by the natural law of growth, and by the conditions of human progress.

The transformation from the maternal phase to the paternal phase in tribal society has been repeatedly noted, especially in America, where ethnologic studies are conducted by experts. The features of change are protean and often puzzling; appearing sometimes in symbolic or linguistic or fiducial guise,[1] though always traceable to increased knowledge,

[1] *E g.*, the Muskwaki tribesman, who has just passed the critical point, says: "The father has the right to name the first child; but if it dies we know the Ancients wish to give the right to the mother."

—including the conception of paternity,—always connected with industrial conditions, and always expressed in social organization. Yet, on careful synthesis, the changes are found to run practically in a single direction; the regressions being rare and small as the shoreward eddies of a rapid river.

So, too, the transformation from civilization to enlightenment is progressing slowly, but surely, in several countries; and here again the movement is essentially in one direction, the regressions few and short. These transformations are prevalently peaceful, though sometimes accompanied by strife and bloodshed. Each recent decade sees also several cases of the replacement of tribal organization by national organization, usually through conquest; for special difficulties accompany this transition, the most revolutionary in the course of human progress. The history of the world, however, reveals no fair example of even temporary regression from national society to tribal society. Thus the evidence of developmental order derived from current history is practically decisive—no less decisive indeed than the indications of individual growth and decline on which practical men rest their firmest convictions.

The records of current history are supplemented by the long backsight and clear foresight of scientific principles. On juxtaposing the culture phases in historical order, it is found that each comprises all the characteristics of the next earlier, plus certain added features. The ocular kinship of savagery is equally characteristic of barbarism, and also of civilization and enlightenment, in which the family group is recognized in common law and statute as well as in affection's ties; while the unwitnessable paternity and the patriarchal-matriarchal rule are superadded in barbarism, to persist as features of family life in both of the higher stages. With the increasing population of the third stage reciprocal domiciliary and territorial rights grow dominant, and are superadded to the consanguinity which previously served to regulate social relations; while in the next stage intellectual and political rights arise, and gradually come to dominate national institutions which continue to recognize territorial rights.

This development by successive increments conforms to the law of growth displayed in every realm of nature: the crystal grows into definite shape by increments of its own substance; the plant grows by increments of various substances transmitted in the crucible of vitality; the animal grows by increments of organic substance coupled with the elimination of effete matter; the demos grows by increments in the form of devices for strengthening mankind and subjugating lower nature.

It conforms also to the cosmic growth displayed in the transition from realm to realm: for, just as the properties of the mineral realm form a common basis to which are added the new properties of vitality in the vegetal realm, motility in the animal realm, and mentality in the human realm, so the maternal kinship of savagery forms the basis of social organization, to which paternity is added in barbarism, a broader fraternity in civilization, and civil equality in enlightenment. Indeed, the development but expresses that growth from simplicity to complexity exemplified by all things terrestrial,—a growth reversible only by catastrophe. So the scientific extension of history and the chronicles alike show that the way of human progress is from savagery, through barbarism, up to civilization, and thence into enlightenment. The knowledge that this is so is no shadowy figment, but a living realization, definite as the knowledge of the average man that his sire was once an infant and will sometime die. The four culture stages are invariable as the Shakspearian Seven Ages of Man; and their course can no more be inverted than can the river be led up-stream, or the graybeard turned back to callow youth and puling infancy.

Both the chronicles and the principles are sustained and explained by analysis of the conditions attending the culture stages. In savagery the groups are small, the problems of life simple, the consequences of good or ill fortune slight and fleeting. The savage is largely a creature of chance, unable to deal with problems in economics or civics, and, in case of overgrowth in population, is compelled to starve and slay until the balance between supply and demand is restored.

In barbarism the groups are larger, the needs more diverse, the industrial and social problems more complex: but the barbarian adds thought to chance, and rises into primitive agriculture and zoöculture whereby the productions of nature are augmented; and, as he develops ability to balance supply and demand without starvation or slaughter, his kind grow into humanitarian habits and institutions.

In civilization the population is multiplied in density, the economic problems are multiplied in complexity, the social problems raised to a higher power; yet civilized man pits forethought against chance, and meets the growing demands by increasing products, meanwhile eschewing warfare save over matters of faith and inherited antipathies, and developing philanthropic motives in connection with elaborate civic institutions fitted to the complex economic conditions.

In enlightenment intellectual needs arise, the demand for education presses, and luxuries become necessities; then man casts off the chains

of chance, and makes invention multiply the sources of supply to meet the multiplied needs; he improves the useful and exterminates the useless among animals and plants through cultivation, and thereby converts the earth and the fulness thereof to the benefit of his kind; he finds new resources in the waters and in the air above and in the rocks beneath, and purifies the foods his kind eat, the liquids his kind drink; and he forswears warfare save for liberty or for sweet charity's sake, and depends on diplomacy for the maintenance of civic relations so complex as to transcend the imagining of primitive men.

Now in every stage the problems are connected with comfort and well-being, *i.e.*, they are economic. Merely vital in lower savagery as among the higher animals, the problems become mainly industrial in barbarism, chiefly social in civilization, and largely intellectual in enlightenment; though the vital and industrial and social elements persist in each higher grade. In every stage the problems are met by coördination, *i.e.*, by adjustment between human power and material things. In lower savagery organs are coördinated through exercise, and the coördination is perpetuated through heredity; with advancing culture, manual devices are coördinated through discovery and imitation, and the coördination is maintained and strengthened through habit and memory. Then peoples and their possessions are coördinated through design born of growing experience, and the arrangement is crystallized through persistent custom and more persistent law; and, finally, ideas are coördinated through invention and immortalized through diffusion. Stated in another way, the problems are met by education—discipline of muscle and nerve, training of hand and eye, nurture of memory and sympathy, cultivation of the inventive and creative faculties. In short, the problems of human life arise with growth of population; and they are solved by means of growing knowledge.

It follows that the order of the four stages is a normal and necessary one, and, also, that the succession can proceed only at a normal rate. The river flows at a rate determined by declivity and cross-section; and the rate cannot be changed without altering these factors. The glacier creeps forward at a rate determined by its longitudinal and transverse sections and a thermal factor; and, while the rate may be changed by modifying the factors, the flow cannot otherwise be materially hastened or slackened without disruption of the gelid mass. In like manner human population normally increases at a rate determined by conditions, which can be varied only by modifying those conditions. So, also, the knowledge required in diversified arts and industries, in

liberalized society, in richer language and literature, and, most of all, in enlightened philosophy, can increase only at a rate determined by intellectual faculties definite as the animal faculty of procreation—a rate measurably accelerated by education or slackened by repression, but otherwise maintaining spontaneously a steady rhythmic swing, persistent as that of planetary revolution.

The four culture stages intergrade in some degree, yet remain so distinct that the representative of one never comprehends the features of those higher, seldom understands the characters of those lower. The black-skinned savage easily affiliates with red or brown indigenes of corresponding grade; for they are similar in handiwork and family organization, and worship similar pantheons with similar rites: but the savage looks askance at the family customs of the barbarian, and can no more grasp the society based on property right than he can solve problems in conic sections or build engines. Indeed, his mind is only paralyzed by contact with the commonplaces of higher culture.

In time the savage, or barbarian, learns to tolerate the devices of enlightenment, just as the lion learns to breed in captivity, and then slowly assimilates the ideas behind the devices; but when the assimilation is complete he is enlightened, whether his skin be yellow or red or black. And in every stage devices—artistic, industrial, social, linguistic, philosophic—are the fruit of thought, the seed of larger knowledge: and fruit and seed follow duly in season; spreading from man to man and from land to land wherever the cerebral soil is found fertile, conveyed by imitation, enriched by cultivation, never lost but by birth of better knowledge, never destroyed unless by annihilation of peoples, ever spreading and blending as a flora, ever burgeoning and blossoming into a veritable mantle of mind investing the mindless world.

A lesson may be drawn from the normal succession of stages in human development. On both hemispheres a contest is raging, the issue of which might seem doubtful if the order of progress were unknown. With recognition of this order, it is seen to be a contest between two culture grades, between higher humanity and lower, between intellectual freedom and mental slavery; and, whatsoever the temporary hazard of battle, there can be but one final outcome. The enlightenment warmed in Albion and kindled in Columbia is the manifest destiny of nations: its rays must reach the remotest isle of Occident and Orient, and shine back in time on the Fatherland of Discoverers.

W J McGee.

DEMOCRATIC ART.

THE advent of the people, which is commonly regarded as the most signal phenomenon of recent centuries, has worked revolutions in the forms and themes of art no less marked than the popular innovations in the processes and institutions of society. Democracy, it would seem, is not a political term alone: it is a universal idea, whose entertainment determines conduct in every one of the spheres of human activity. Democracy cannot prove itself established until its principles have permeated society in every part, and displaced all that has been produced under the influence of monarchic and aristocratic ideas. Its function is to grow out of the social soil strictly autochthonic education, religion, philosophy, and arts, which shall be uniform with progress; corroborating in the fullest degree the immediate land and contemporary life.

The process of transformation and adjustment which the fine arts are undergoing, in passing from an aristocratic to a democratic basis, is one of the most important and significant, though generally unrecognized, movements of the modern world. Although the subject is beset with difficulties, I propose to examine with some care the nature and extent of the specific changes compelled in art by the Time-Spirit in the midst of the general results flowing from universal emancipation. The movement is, of course, incomplete in its operation. The present period is one of transition. An adequately representative art does not exist to-day in any democratic community, not even in any portion of America, which is still the most perfect and consistent embodiment of the democratic idea, and in whose bounds, therefore, we should expect the evidences of artistic freedom.

If a reason be sought for the insufficiency of American art, two facts will be found to have bearing upon the question. One is the commonly recognized truth that the actual scenery of the American land and the events of its population are themselves transcendent in their poetic quality. As the French Revolution, by transferring the drama of life from the stage to the streets, ruined the theatres of Paris, so the very variety and intensity of our own dramatic life make us content to forego the simulation of the play and the poem. Our "Iliad" is still in the making.

Another fact connects the foregoing with the discussion of this paper, namely, that our art, however potential in its subject-quality, is still formed, to a considerable degree, under the guidance of the traditions of feudal Europe. To this day Paris is the Mecca of painters. The foreign melodrama, false to our notions of heroism, remains the accepted model of playwrights, rather than native plays of the type of Herne's "Shore Acres" or Thomas's "In Mizzoura." Dvorák's American symphony contains nothing distinctively Western: Damrosch's "Scarlet Letter" is Germanic in everything but title. And not only is our creative art formed under direction, but the accepted principles of criticism are traditional; and we look at even the art that is modern through the eyes of foreign courts. Emerson's "American Scholar" was called "the scholar's Declaration of Independence": that revolution is completed. But the declaration of artistic and critical independence has yet to be formulated and written. It must be understood, therefore, that any conclusion respecting either the descriptive or the speculative phases of democratic art and criticism is but tentative. The event awaits the completion of the democratic movement. Enough, however, has been accomplished, and tendencies are clearly enough defined, to enable us to understand, in part by speculation, in part by observation, the characteristics of democratic art, and through these the forms of democratic criticism.

These characteristics may first be formulated by drawing a contrast between aristocracy and democracy in their political and social aspects. Such preliminary scrutiny and definition of political distinctions will be found to be valuable to our purpose because of the æsthetic ingredient that all social ideas contain, inasmuch as this or that idea is generally entertained on account of its appeal to the imagination as well as to the reason; and a final selection of any idea is made as much on the grounds of its propriety as of its service. When the members of any society prize the political form they have achieved as having value in itself, as somewhat intrinsically and eternally right and beautiful,—when, that is, the subjects of a king consecrate the law and order of their society as something inherently beautiful, and the citizens of a republic are pleased to contemplate their structureless, but practical, democracy as something divinely just and righteous,—the social imagination receives a coloring that may be called æsthetic; and the artistic product, in its turn, is consciously or unconsciously made to conform to the general principle. It is historically, as philosophically, true that the fine arts correspond, in general aspects at least, often in the minutest detail, to the modes of thought and feeling that characterize social conditions.

Socially an aristocratic society exhibits three special features; viz., conventionality as to form, exclusiveness as to content, conservatism in matters of idealism. A democracy, on the other hand, is unconventional, almost structureless in its forms, inclusive in its content, progressive in its ideals.

An examination of artistic production with respect to form, content, and general attitude toward life and thought, will give the definition of the two classes of art in question.

In its forms aristocratic art will first be dignified: it must wear the dress prescribed by custom, and defer to the proprieties that hedge the throne. Composition is determined by the standard of "good form," which has been established by the critical class, and is maintained in force by tradition. Aristocratic art is largely external, but perfect within the limits of the "grand manner," and fixed in its "classic" perfection by authoritative conventions.

As a patrician class shuns the vulgar phrase in the interest of culture, so it seeks to preserve its refinement by avoiding the vulgar person. Its art, accordingly, is exclusive in its subject-matter; only those characters and themes having admission which, by their nobility and dignity, are thought to be susceptible of artistic treatment. The passions that run from lord to lady inspire the lyric song; while "knights' and ladies' gentle deeds" constitute the scope of epic or dramatic action. In pastorals shepherds and shepherdesses of the field appear: but the dainty *Corydons* and *Chloes* that play at keeping sheep never see a pasture; and the sheep that play at being kept never enter a fold. A really common person may enter upon the stage to play buffoonery or point a biting satire, but never to maintain an independent interest or destiny.

Toward life aristocracy ever maintains the conservative attitude. It exists by gifts of the past. Its powers and privileges, private and public, are derived by inheritance. The will of the father governs the career of the child: the experience of age restrains the creative impulses of youth. An aristocracy resists the encroachment of new ideas: it doubts nothing, desires nothing, holds permanently to beliefs, is content with metes and bounds. Its art pictures in the past the Golden Age. The virtues it extols are those that belong to feudalism, loyalty to the king, obedience to inherited authority.

The popularization of art results in forms that are fluid and varied, in subjects fully comprehensive in their scope, in ideals that freely enlarge and advance. The one word comprehending these features, the word

which justifies the use of the term "democratic" in characterizing them, is "freedom"—the freedom to choose without restraint forms and subjects, making possible a sincere expression of personality, which is the fundamental content of all true art; the freedom to experiment and prophesy, rendering easy a progression to higher and sincerer modes of expression.

As the leading principle of a democracy is individualism, the art that arises from among the people has for its chief characteristic infinite variety of form. The one effort of democratic art being to exploit individuals, diverse each from the other, the modes of utterance change to correspond to the nature of the man. Every artist becomes a law unto himself, and learns to follow an impressionistic method to the full license of egotism. The acceptance of all the facts of life involves a primitive directness of method in exhibiting such facts. All true realism contains the personal quality, the individualization of sight and interpretation. Styles, therefore, in realistic art, are simple, fluid, and various. Instead of a single standard of established "good form," a hundred plebeian modes of significance arise. The canon of order in variety is supplanted by that of significance in variety. The symmetrical unity of aristocratic art gives place to multiple meaning,—an inner for an outer. Irregularity of form is the very genius of an art that is controlled by an inner principle. Ruskin said of a Gothic building: "If one part always answers to another part, it is sure to be a bad building; and the greater and more conspicuous the irregularities, the greater the chances are that it is a good one." Imperfections of form in painting, discordant notes in music, vulgar phrases in poetry, are artistically permissible so long as these are significant of character. Individual sincerity governs manner, rather than the conventions of a dictatorial artistic class.

A second great principle of democracy is equality. Equality opposes comprehensiveness to exclusiveness. Democratic philosophy asserts that the most common objects of nature, and the most common events of life, are instinct with latent principles which, when detected, approve themselves divine. So long as the all-inclusive light falls round the objects of the universe, so long will love and sympathy comprehend the divinity that appears universally in objects. Nothing in man or in nature is unpoetical, if treated sincerely by a poet who has the largeness and the insight to penetrate below externals to the heart and essence of things. There is nothing profane save profane eyes and minds. The acceptance of the universal and unseen is rendered imperative; for only by the transcendent idea can each fact and person

be given place and significance in the scheme of the world. The democratic principle springs from faith—a faith becoming more and more absolute as man rises in the scale of being. In every individual the prophetic eye perceives the revelation in outlines, however dim, of gods and heroes. By virtue of faith the note of popular art is inclusiveness. Love casts out scorn and denial. High life and low life contribute their characteristic themes.

Goethe defined good society as that which furnished no materials for poetry; and Mr. Symonds says: "How hardly shall they who wear evening clothes and ball dresses enter into the kingdom of art." But democratic art does not exclude good society. Society, bending and gliding at the dance, has a specific note of grace no less to be admired and cherished than that attending the superb poise of the reaper as he swings his sickle, or the strong flex of the blacksmith's muscles as he strikes the glowing iron. The older themes of aristocracy are not to be neglected. Why should they be? Heroism remains heroic still. The youth of a Western village may hearken to the shout of *Achilles* as it rings out on the plains of Troy; he may shudder at the heroic suffering of *Prometheus* undergoing chastening like a god; he may spring up at the sound of *Roland's* or *Oliver's* trumpet to recover a lost field; but, while not failing to recognize the noble heroisms of god-like action, he is, as a member of the common mass, more concerned about the lovely qualities that attach to all human life. The hero at the plough or the forge, the heroine at the loom or in the kitchen, may be dignified beyond our means of expressing by patiently enduring the edicts of fate, and by suffering with hardihood all tragic woe. "Lads a-hold of fire-engines and hook-and-ladder ropes no less to me," said the bard of democracy, "than the gods of the antique wars." "We owe to genius," says Emerson, "always the same debt of lifting the curtain of the common, and showing us that divinities are sitting in the seeming gang of gypsies and peddlers."

It is a feature of democracy that it looks to the future for its justification. As yet the social ideal of democracy is unrealized. The New World is destined to vast growths and unparalleled achievements. Whitman announces for America "splendors and majesties to make all previous politics of the earth insignificant." He apostrophizes the New World is his most optimistic strain:

> "Thou mental, moral orb—thou New, indeed new, Spiritual World!
> The Present holds thee not—for such vast growth as thine,
> For such unparallel'd flight as thine, such brood as thine,
> The *Future* only holds thee and can hold thee."

Bold in this promise, the pioneer of progress, accepting what accrues to him from the past not as an obligation, but as a free inheritance, moves gladly forward toward an ideal goal; believing he is marching toward something great and fortunate. The Golden Age lies somewhere in the twentieth century—always beyond, a "Flying Perfect." The poet is given to celebrate not the advance that has been made, but the progress that shall be; and if he look to the past at all, it is to gain ground for prophecy. Shelley, despairing over the past, restless in the present, constructing an ideal world in a far-distant future, fully incarnated the democratic spirit. William Morris, though he dreamt of the past, yet had eyes ever fixed on ideal landscapes, ideal social systems, ideal fellowships. With characteristic optimism, Whitman announced: "All that the past was not the future will be"; and to that future the poet trusted his ideas, never doubting that an audience would be raised up to justify him. Such usage is significant of democratic procedure. "Nothing conceivable," said De Tocqueville, "is so petty, so insipid, so crowded with petty interests, in one word so unpoetic, as the life of a man in the United States; but amongst the thoughts it suggests there is always one which is full of poetry, and this is the hidden nerve which gives vigor to the whole frame." This thought, so vital and poetic, De Tocqueville goes on to say, is the perfectibility of human nature. To each in some degree comes the splendid vision of the not distant future, when personal independence, good-will, charity, comradeship, shall be the rule and practice, the joy and independence of the race. The attitude of hope and expectancy encourages the formulation of new ideals, and experimentation with respect to new art-forms.

Aristocratic art is typical: it lays aside the common attributes, and seeks the type-forms. Democratic art is individual and real: it accepts the personal view, and invests common attributes with meaning. The one gives unity to the beautiful: the other expands and diversifies it. The one, being reminiscent, is static; the other, being prospective, is dynamic. The one harmonizes what is given: the other suggests what is to be. The note of the one is despair: that of the other is triumph and joy. The one is bound: the other is free.

All the fine arts, with the exception perhaps of sculpture, which has never undergone romantic revival, might be drawn upon to illustrate the various effects of the democratization of art. Architecture was the first of the arts to be popularized. We should expect such an event, inasmuch as architecture is the most intimate of the arts, the most closely related to our daily life; for, though we may not be able to write

a poem, or to paint, we are most of us called upon at some time to build something, a home at least. As a matter of fact, architecture, up to the time of the invention of printing, was the chief register of human thought; and its forms corresponded most closely with the dominant ideas of history. The whole series of structural changes which freedom accomplishes is exhibited in the history of architecture from the time of the Hindu and Egyptian temples, the forms of which answered to the conditions of a theocracy, to the period of the Middle Ages, when the Gothic cathedral took shape under conditions of greater freedom.

The general character of ancient architecture is immobility. Conventionality covered the temples like another petrifaction. Primitive types were consecrated to the embodiment of a fixed and most rigorous dogma. Traditional lines were retained from century to century without variation. As the stone embodied an obscure symbolism, the interpretation of a special priestly class was required, the directive functions of whom have been performed by the critics of culture and good taste in every aristocratic age. Victor Hugo, in the Fifth Book of his "Notre Dame," relates the story of the escape of the mediæval cathedral from the authoritative absolutism of the priest, and how, for the first time since the Greek, the religious temple fell into the hands of the artist, and became the property of the imagination, of poetry, of the people. Thought, it appears, was free in the Middle Ages in the one direction of architecture. The modern freedom of the press is scarcely greater. The creative genius of the people, repressed from political and social activity by feudalism, and from religious constructiveness by ecclesiastical absolutism, emerged in the one way left open—the way of architecture. The cathedral of Roman and Byzantine traditions furnished the conventional ground; but, when the mobility and spiritual expressiveness of stone were once discovered, forms tractable to thought and capable of infinite variation were rapidly developed. If a poet was born he became a builder. The other arts, being more restricted in their expressiveness, were subordinated to this one achievement. Architecture became a coöperative art, the art of the arts, the art of the whole people. The sculptor must fill the niches and cap the pinnacles with appropriate figures; the painter must decorate the walls with scenic frescoes, and design forms and select colors for the windows; the musician must raise the lofty organ to complete the mystery of vaulted roof with vanishing sound; the poet must exercise his genius in the composition of canticle and responsions. A sublime unity of the arts was thus accomplished to enhance the glory of the one free art.

The effect of the popularization of architecture may be seen in the very enthusiasm for structure that was engendered in the free cities of Europe. During the period of the emancipatory process so many cathedrals arose in every part of Christendom, that we can hardly believe the report of their number. With invention unhindered, rapid and innumerable changes took place in styles. In three centuries the aspect of the standard cathedral was completely transformed. Upon the nature of the changes William Morris, in his essay on "Gothic Architecture," makes the following comment:

"If some abbot or monk of the eleventh century could have been brought back to his rebuilt church of the thirteenth, he might almost have thought some miracle had taken place: the huge cylindrical or square piers transformed into clusters of slim, elegant shafts; the narrow, round-headed windows supplanted by tall, wide lancets, elegantly glazed with pattern and subject; the bold vault spanning the wide nave instead of the flat wooden ceiling of past days; the extreme richness of the mouldings with which every member is treated; the elegance and order of the floral sculpture, the grace and good drawing of the imagery." (Pp. 38, 39.)

Free creation thus resulted in every improvement. Though a logical style was finally developed, there was not at any time a fixity of form. Throughout the period of growth the use was granted of material of any kind, arches of any span or altitude, pillars of any degree of strength or tenuity, windows of any size or shape, and details of any amount of elaboration. Says Morris:

"Slim elegance the Gothic could produce, or sturdy solidity, as its moods went. Material was not its master, but its servant; marble was not necessary to its beauty; stone would do, or brick, or timber. In default of carving, it would set together cubes of glass or whatsoever was shining and fair-hued, and cover every portion of its interiors with a fairy coat of splendor; or would mould mere plaster into intricacy of work scarce to be followed, but never wearying the eyes with its delicacy and expressiveness of line. Smoothness it loves, the utmost finish that the hand can give; but if material or skill fail, the rougher work shall so be wrought that it also shall please us with its inventive suggestion. For the iron rule of the classical period, the acknowledged slavery of everyone but the great man, was gone, and freedom had taken its place." (*Id.*, pp. 32, 33.)

With increasing license the priestly symbolism was modified; and a meaning foreign to religion would be embodied in a door, or a façade, sometimes in an entire church. As Victor Hugo remarks in "Notre Dame":

"No idea can be given of the liberties taken by architects. We find capitals interwoven with monks and nuns in shameful attitudes, as in the Salle des Cheminées of the Palace of Justice at Paris; we find Noah's adventures carved at full length, as under the great porch at Bourges; or we find a tipsy monk, with the ears of an ass

and a glass in his hand, laughing in the face of an entire community, as in the lavatory of the Abbey of Bocherville. Sometimes a doorway, a façade, an entire church, offers a symbolic meaning hostile to the Church. Guillaume de Paris in the thirteenth century, Nicholas Flamel in the fifteenth, wrote such seditious pages. Saint-Jacques de la Boucherie was a church of opposition throughout." (English trans., Sterling edit., pp. 213, 214.)

With the restriction of dogma removed, the interests of beauty or significance alone determined the artist's plan.

The secret of the evolution is found in the freedom of the workmen. Each builder and mason was at liberty to leave some evidence of his own individuality upon the materials, some mark of his pleasure in service. The chief architect was only the master-workman; and the masons and carvers were architects in their turn; mingling fancy and imagination with their technical skill, and giving to each object the vitality of spontaneous design and execution. Freedom, in short, was the essential quality of Gothic architecture.

For full three hundred years the development of an individualized architecture continued—a bright, creative, golden period. When the printing-press was invented "the book," as Victor Hugo puts it, "destroyed the building." Mind had found other channels for its activity. But the Gothic cathedrals accomplished their purpose; and they stand to witness forever to the advantages of freedom—a promise of democratic art.

The freedom, originality, variety, and progress that marked the making of Gothic architecture are the characteristics that distinguish the modern structures being produced on American and democratic soil. The waves of classical renaissance that swept across Europe in ages subsequent to the Gothic, leaving in its recession such masses of formal, pedantic structures as St. Paul's in London and its group of parish churches,—just meant to be the homes of cultivated, unenthusiastic ecclesiasticism,—had but little effect upon the architectural movement of the New World. Architecture in America, especially during the last fifty years, is conspicuous by the quantity, variety, and originality of native forms, and by the freedom with which the traditional models are employed. The leading characteristic is a readiness to strike out new paths under the requirement of changing conditions and of practical considerations. The principle of individuality, especially in the newer cities of the West, controls domestic structure, to the end of multiplying designs almost infinitely, many of which, it is true, are painful and monstrous to classic good taste (the penalty democracy pays for its freedom); but many more are full of artistic beauty and promise.

Conspicuous secular architecture may be said to constitute America's contribution to the modern. The epochs of popes and kings have passed; and this is no age in which to build churches or palaces. Secularism and industrial democracy are keys to the present. The commercial temple, largely the product of the American mind, is the exact equivalent of the modern business ideal. The daring, strength, Titanic energy, intelligence, and majesty evidenced in many of the modern business temples indicate precisely one, and perhaps the dominant, feature of American character. These buildings are significant in their principles of structure, rather than formal. They observe the logic of function. They are not built, that is, primarily, to display artistic proportions, but to serve a purpose and fulfil a need. The Time-Spirit was their architect; necessity was their craftsmaster. In them a new group of social conditions has found a habitation.

The growth of population in cities, the centralization of business in a "down-town" district, the coöperation of men necessitated by economy and despatch, the abundance and cheapness of iron and steel, the convenience and serviceability of steam heat and the electric light, the quick transportation made possible by the elevator—these economic forces and mechanical devices have combined to make such structures as the Masonic Temple in Chicago masterpieces of modernity, admirably answering to new conditions; and structures as full of meaning and ideal content as any that architectural history records. In display of simplicity, in the use of broad surfaces, in control of the lines of height, and in the artistic handling of mass, the Chicago group of office-buildings is unique among the architecture of the world. These are proud structures, defiant in their altitude, every story a soaring and exulting fact. In their pride and altitude their artistic feeling lies. I admire the daring, wisdom, and genius of the men who designed and erected them without reference —in the jargon of politics—to any other nation on earth. When to the strength of a general ideal are added the delicacy and refinement of a personal conception, when the strictly artistic sentiment is perceived and accentuated, democracy may point to its commercial structures with the pride of a great achievement. They spring from freedom: in the lines of freedom they are elaborated.

In his essay, "Objective and Subjective," Mr. Sullivan, the architect of the Transportation Building at the Fair, the Auditorium and the Schiller Theatre at Chicago, the Union Trust Building at St. Louis, the Guarantee Building at Buffalo, and the Mercantile Building in New York, thus explains his theory:

"I hold that the architectural art, thus far, has failed to reach its highest development, its fullest capability of imagination, of thought and expression, because it has not yet found a way to become truly *plastic;* it does not yet respond to the poet's touch. That it is to-day the only art for which the multitudinous rhythms of outward nature, the manifold fluctuations of man's inner being, have no significance, no place.

That the Greek architecture, unerring as far as it went—and it went very far indeed in one direction—was but one radius within the field of a possible circle of expression. That, though perfect in its eyesight, definite in its desires, clear in its purpose, it was not resourceful in forms; that it lacked the flexibility and the humanity to respond to the varied and constantly shifting desires of the heart.

It was a pure, it was a noble art; wherefore we call it classic: but, after all, it was an apologetic art; for, while possessing serenity, it lacked the divinely human element of mobility. The Greeks never caught the secret of the changing of the seasons, the orderly and complete sequence of their rhythms within the calmly moving year. Nor did this self-same Greek know what we now know of Nature's bounty: for music in those days had not been born; this lovely friend, approaching man to man, had not yet begun to bloom as a rose, to exhale its wondrous perfume.

That the Gothic architecture, with sombre, ecstatic eye, with its thought far above with Christ in the heavens, seeing but little here below, feverish and overwrought, taking comfort in gardening and plant-life, sympathizing deeply with Nature's visible forms, evolved a copious and rich variety of incidental expressions, but lacked the unitary comprehension, the absolute consciousness and mastery of pure form that can come alone of unclouded and serene contemplation of perfect repose and peace of mind.

I believe, in other words, that the Greek knew the statics, the Goth the dynamics of the art, but that neither of them suspected the mobile equilibrium of it—neither of them divined the movement and stability of Nature. Failing in this, both have forever fallen short, and must pass away when the true, the Poetic Architecture shall arise,—that architecture which shall speak with clearness, with eloquence, and with warmth of the fulness, the completeness of Man's intercourse with Nature and with his fellow-men." (Pp. 12, 13.)

The completion of a personalized rhythmic architecture, the attainment in structure of what Wagner has done in music and Whitman in poetry, Mr. Sullivan reserves for the builders of his native land.

The same freedom characterizes the American use of traditional forms. By means of association democracy must realize its connection with a historic past. Innumerable memories cling to and linger around a Grecian column, a Roman arch, a Gothic spire. These forms serve as organs of recollection; reminding democracy of its historical attachments. In buildings designed in part for display,—capitols, churches, libraries, museums, and other edifices of a public character,—artistic and purely architectural conditions meet the maker; and the forms and proportions sanctioned by historical experience may be properly employed.

When traditions are used as servants and not as masters, when they are permitted to suggest and not allowed to command, the architecture resulting from such combination of tradition and free creation may still

be classed as democratic. In cases where a style was adopted arbitrarily, and rigidly applied, as often by Bullfinch and the earlier architects, the freedom of creation had no part in it; a dead past had been continued into the living present; the artist was a slave to tradition and not a freeman. But the Italianism of the Boston Public Library, the Romanesque features of Trinity Church, Boston, the Florentine traditions in the Capitol at Washington, the Gothicism of the halls of the University of Chicago, the classicism of the World's Fair buildings, serve their proper and proportionate function by perpetuating historic experience and by displaying cultural association, while they leave the buildings free to modern and American uses.

I have used the history of architecture to illustrate the variety of form that follows the popularization of art. The other arts may be briefly referred to, in order to give examples of the comprehensiveness of subject-matter resulting from the deification of nature and man. The history of music, from Bach to Wagner, presents the features of emancipation with respect to form, and also the extension of the scope of music to the inclusion of poetical concepts. The significance of Wagner, who may be taken as the representative democrat in music, consists in his effort to restore the relations between life and art—first, by forming a drama which should be all-inclusive, expressing the vast issues and complex relations of modern life; and, second, by composing music which is indifferent to the rules of the symphony, but which is dramatic and realistic in motive and fully apprehensible by personality and the poetic judgment.

Painting has had a similar development; its history being marked by a growing individualization of form and an increasing inclusiveness of theme. The "Men of 1830" stood against the Academy for sincerity and the personal view in confronting nature. Jean François Millet carried forward the movement of 1830 by adding to the interest of landscape the inspiration of humanity, and avowed that a peasant was as worthy as a king for portraiture. He broke from the slavery of conventional art, and put freely upon canvas the actual earth-born man and woman, rude in their outline, but vigorous in their action, and who face courageously their destiny on the laborious earth. "Beauty," said Millet, "is the fit, the appropriate, the serviceable character well rendered, an idea well wrought out with largeness and simplicity."

Literature again displays the whole series of emancipatory phenomena. Its history is especially serviceable in illustrating the extension of content from an Olympian apotheosis to an apotheosis of the actual.

One of the most significant lines in modern literature is Whitman's welcome to the outcast: "Not till the sun excludes you do I exclude you."

As the stream of tendency toward democracy cannot be turned back nor permanently checked, it must be concluded that along the lines of freedom art will continue to advance until every subject shall be included, and every thought shall find its appropriate form.

It is likely that there are those who are not in sympathy with these tendencies, who resent the destruction of ancient idols, and who maintain that these innovations indicate the decline and decay of art. The fear of timid souls is well expressed by Lowell in "The Cathedral."[1]

The lament is to be expected. The heading of one of the chapters of "The Dream of John Ball" is the commonplace truth: "Hard it is for the Old World to see the New." But the changes I have described cannot well be avoided. Metamorphosis is the law of all living things. This is not a matter of what we, as an artistic or academic class, want. It is what the people can be prevailed upon to give. I do not want an art of scholars, but one of men. Art must descend from academic technicalities and become commonplace: in the words of Prof. Schreiber, "it must be reinstated as a natural exponent of our common culture." William Morris came to a profound conclusion when, announcing his faith in the common blood, he said: "If I can't be the laureate of reading men, I'll be the laureate of sweating men." Art must be reclaimed for men, the masses. Otherwise it will become abnormal, degenerate into pettiness, and forsake the walks of common truth. Shame to us that stigma should attach to work that is close to the universal heart and mind, and praise be accorded to what is rare and exotic and refined. Beauty is wherever light is—the most common thing in the universe. Ruskin declined to interest himself in America because there were no castles here, nor ruins—is beauty limited to where castles are? Castles, methinks, were built by men. Time, that wrought the present ruin of past buildings, will make future ruins of present buildings. But who wants an art based upon ruins? Who will consent to be ruled by a dead hand? Is it not better to free the creative energies in the present? "Faith and wonder and the primal earth," said Lowell, "are born into the world with every child."

To my mind, the popularization of art—the rendering of form and color and theme characteristic and commonplace—marks a real advance.

[1] "The Poetical Works of JAMES RUSSELL LOWELL." Household Edition (1885), pp. 400, 401.

I will not admit for a moment that the triumph of democracy means the wane of art. Indeed, before the modern artist lies a more arduous task than any yet attempted. In approaching the people with sympathetic knowledge the danger is not that the artist's standards will be abased, but rather that his thought and skill will not be sufficient to express the real dignity of the people. It is not so easy to

> "Give to barrows, trays, and pans
> Grace and glitter of romance."

My feeling is that the opportunities of modern and American art are great and beyond compare. Almost for the first time in history the artist is a freeman. Obsolete obstructions are fully cleared. He is independent of any ecclesiastical or aristocratic authority. He is delivered from a scholastic tradition regarding style and subject. He shares in the emancipation of the individual brought about by social movements, and in the freedom of the intellect caused by modern science. He may face the whole of nature and the whole of humanity. It is his privilege to create the styles adequate to a great people and land. It is his opportunity to begin the epic of the modern world,—the world as modernly known,—the world of Titanic forces taking birth. It is his mission to open for the imagination the universe as scientifically disclosed. It is his fortune to be able to set forth in all its nobility and grandeur the democratic idea,—the idea of self-sovereignty and of sovereign association, the idea of a life self-poised and sole as stars, yet one as light. If art falls short of its present possibilities, the fault is not with the materials: it does not lie in any want of freedom, but rests rather with the artist who lacks the eyes to see, the mind to think, the skill to compose.

Yet again the fault shall not be alone with the artist, but with the people: art is the answer to a need felt in the popular heart. The people create: they furnish life for art's impulse, freedom for its atmosphere, patronage for its support. From them alone can come the impulse that shall hasten the production of a genuine democratic art.

Oscar Lovell Triggs.

THE NEW PSYCHOLOGY AND THE CONSULTING PSYCHOLOGIST.

THERE have been recently a number of discussions by very competent authorities concerning the present situation and prospects of the various studies and investigations that constitute what is often called the New Psychology. It is, perhaps, presumptuous for me to undertake to add to the contributions to this topic. But as a student of general philosophy, and also as one interested in certain aspects of the New Psychology itself, I have taken such interest in the recent controversies as to lead me to attempt in the present paper both a brief review of the general nature of our present problem and a practical suggestion as to a way in which the New Psychology may be aided in obtaining a more satisfactory relation to the profession of the teacher.

No one familiar with the literature of any of the recent types of psychological investigation can doubt that much, both of novelty and of value, is constantly coming to light in the course of the newer studies of the mental aspects of human nature. It is not surprising, therefore, that those who have practically to deal with the management of human nature, above all, the teaching profession, should be encouraged to cherish very high hopes as to the service which may be derived from these investigations. On the other hand, as has been lately pointed out by various authorities, a good many of these hopes concerning what psychology in the present state of its development can do to settle fundamental questions as to educational methods and ideals have been over-sanguine. The psychologist, whatever his speciality, has his own scientific tasks. The teacher, whatever his training, has his own plans, and must pursue in the end methods determined by these plans and by numerous social interests with which the study of psychology may have little or nothing to do. The teacher hopes too much, if he ventures to anticipate that the scientific study of human nature can of itself alone predetermine even the most fundamental part of what the teacher himself has to seek as an ideal, or of what he has to use as means for attaining that ideal.

Over-sanguine hopes, however, may easily lead to correspondingly bitter disappointments. This incongruity between the purposes of a sci-

ence and the undertakings of an art is in other branches of human endeavor a familiar fact. The theoretical study of electricity went on for a long time before modern electrical engineering was in existence, or was even a very near and reasonable hope. Yet, in many such cases, patient waiting has been rewarded; and, just as truly, over-hasty hopefulness has been often disappointed. Anyone duly acquainted with the present undertakings of modern psychology ought to agree that these undertakings must in the end prove as important for our dealing with human nature as physical and physiological researches have proved in other modern arts. But, on the other hand, it is perfectly true that the psychologists themselves have a right to pursue these lines of research without being continually interrupted by over-hasty demands for practical results. It is equally true that no immediate and fundamental revolution in educational methods and ideals can be said to be warranted by what is at present known through the newer psychological researches. One who discusses the relation between psychology and education at the present time has no right, therefore, to attempt to settle anything as a finality; for the psychological science of to-day is simply no finality whatever. The true practical interest of such a discussion lies in attempting to consider how at the present time, and under the present temporary and rapidly changing conditions, the teacher and the psychologist can best be brought into coöperation.

I.

A closer approach to this question may first be made through an attempt at a plain statement as to the general situation in psychology at the present day. Every discussion of the New Psychology and of its place in education seems to presuppose the thesis that there *is* a New Psychology. This thesis is undoubtedly, in some sense, correct. None the less is the whole matter subject to a good deal of misunderstanding; and we may, therefore, ask at once: "In precisely what sense is there a New Psychology at all? In what sense was there an Old Psychology, which is now abandoned or superseded?" To these questions I find at present answers, current and frequently repeated, which I think to be nevertheless wrong answers. I refer particularly to two statements, both of which are not unknown in the recent literature of the subject. I shall consider these two statements in order.

The first of these statements runs: There was once something in existence and in favor which is henceforth to be known as the Old or

Rational Psychology. This psychology, so the statement in question continues, was concerned with the nature, the origin, the destiny of the human soul, of the ego, of man as he is in himself. But, the same statement adds, modern thought has somehow changed all this. We now no longer study that Old or Rational Psychology. We have given up trying to find out the true nature of man or of the soul, or the true destiny and meaning of our life. We now study nerve-cells and reflexes, the knee-jerk, and the scatter-wittedness of children's minds. We take reaction times, and make tables of the statistics of fears, bad dreams, and color-hearing. And this is the New Psychology. This, in sum, is the first of the two statements to which I have just referred. I summarize this statement in a somewhat crude form; but what I mean is that the statement in question, in any form, sets forth an essentially false antithesis. As a fact, no such change in the objects and interests of human thought has taken place as this false antithesis implies.

It is true that once questions about the origin and destiny of the human ego, in other words, questions about man's place in the universe, were current and favorite questions,—current and favorite amongst believers in any form of religious faith, amongst theologians of every school, amongst philosophers of every seriously reflective and thoroughgoing group of philosophical investigators. It is also true that precisely such questions are current to-day amongst precisely the same types of persons. If you have any form of religious faith, you believe something about man's nature and destiny and place in the universe. If you study a technical theology, you are interested in the statement and defence of some such faith. If you have time to study philosophy, the principal part of your work as a student of metaphysical issues will properly be devoted to precisely these questions. These questions, then, are in no sense antiquated. They are not superseded. They are as modern, as human, as intensely fascinating, as rational as ever they were. The human mind has precisely the same right to face ultimate issues that ever it had. And, in facing these ultimate issues, if it seeks new light, it also respects, uses, and depends upon types of insight that are very ancient. No new psychology, no other form of current doctrine, has in the least changed this essential situation. So long as man is interested in his own destiny, he will either believe or philosophize about ultimate questions. And when he has time and spirit for the undertaking, he will have a right to philosophize; and neither neurology nor child-study will ever interfere with rational attempts at a philosophy of mind. If such a philosophy of mind be what is meant by the Old Psychology, I reply that such Old

Psychology is precisely as new and as interesting to philosophers to-day as ever it was.

But, meanwhile, I myself should maintain that no such philosophical study of ultimate questions has any very direct bearing upon the technical problems of educational methods. Philosophy notoriously bakes no bread. It is true, therefore, that the sort of psychology of direct interest to the teacher must, in general, be Empirical Psychology. Empirical Psychology is an effort to understand, in as scientific a way as possible, the natural history, the facts, and laws of the behavior of man's mind as they exist for our daily experience. And the study of the natural history of the human mind is itself in no wise dependent upon any particular philosophical or theological theory. The philosophical study of man's nature and destiny is itself very distinct from the study of Empirical Psychology proper. But this distinction is in no wise a novel one. Nor is the recognition of this distinction in any sense peculiarly modern. Aristotle already clearly distinguished the study of the natural history of man, in his physical, in his mental, and in his social aspects, from the inquiry into metaphysical or ultimate philosophical and theological problems. Empirical Psychology, viewed as such, never has undertaken to solve ultimate philosophical issues. So far, then, there is a true antithesis between the philosophy of mind and the empirical study of the contents and behavior of man's mind. But this antithesis is simply not one between the Old and the New. It is, *mutatis mutandis*, very much the kind of distinction of office which exists between mathematics and the special physical sciences. A man who talked of mathematics in general as something to be called "old," and who opposed what he called the Old Mathematics to what he called the New Theory of Electricity, and who said that one of these pursuits was destined to supersede the other, would be as ignorant of the business of science as are those who narrowly and absurdly oppose something said to be superseded, which they call the Old or Rational Psychology (and which was and is nothing but the philosophical study of man's life), to something which they call the New Psychology, which is merely our best present effort to make out what we can about the natural history of the human mind. So much, then, for the first of our two statements of the antithesis between the old and the new in psychology.

II.

The second false statement which I wish to set aside defines the antithesis between the Old and the New as follows: Once, it says, there

existed a study of human nature which was exclusively introspective. The psychologist studied merely his own individual mind. That was the psychology of the arm-chair. That was the Old Psychology. It was pursued, says this statement, until very recently; say until Fechner, or until Herbert Spencer. The New Psychology is not thus exclusively introspective. It is experimental, or social, or physiological, or comparative. It forsakes the arm-chair, and makes use of the laboratory, of the dissecting-room, and of a wide observation of many beings with minds. Now of course the Old Psychology, being, according to this view, introspective, interested merely the individual psychologist, who edified himself and not his brethren. As the teacher has not amongst his own pupils that particular Old Psychologist whose book used to be a classic, the teacher can be but little helped by that respectable person's study of his own states of mind. Therefore the teacher must be exclusively interested in the New Psychology, since that psychology is not concerned with any one man's states of mind, but with facts capable of a more universal verification.

Once more I have stated somewhat crudely the view that I oppose; but what I mean is, that, in any form, this statement is hopelessly unhistorical. It gives us a false antithesis. There has never been any notable study of human nature in its empirical aspects that was satisfied to be mainly introspective. Aristotle's psychology, as it appears in his treatise on that subject, the first of all European treatises belonging to the field, is fundamentally a psycho-physical doctrine. Aristotle very carefully states the psycho-physical programme, and pursues it according to his light. He uses introspection very much as a modern experimental psychologist would do. His sources of psychological knowledge are on occasion medical. They are very frequently, in the more general sense, biological. They include an effort toward a study of comparative psychology. They make especially prominent observations upon mankind in general. In the ethical and political treatises of Aristotle, such observation was pursued far into the social realm.

Nor is the later psychology of the ancients, nor is mediæval psychology, at all exclusively introspective. To take a notable instance, the famous doctrine of the Faculties of the Mind was obviously derived from nobody's study of his own mind, but rather from the common social traditions about human nature embodied in the current psychological vocabulary. These common social traditions are the precipitate, so to speak, of generations of comments passed upon men by other men. In brief, one may simply defy students of psychology to point out where, in

the whole past history of man's efforts to understand the human mind, an exclusively or even mainly introspective empirical psychology has ever existed or even been attempted. The common gossip of social intercourse, the more precise observation of the forms of social and political life, the obviously psycho-physical doctrine of the temperaments,—a doctrine absolutely inaccessible to pure introspection,—these are typical cases illustrating the methods by which the study of the natural history of mind has always been pursued. To quote one more special case, consider Locke's doctrine about the intellect. The first book of Locke's "Essay on the Human Understanding" is devoted to the famous onslaught on the doctrine of innate ideas. As Locke pursues this argument, what are his sources of psychological information? I reply, apart from their necessary crudity when criticised from our present point of view, Locke's sources have to be defined as anthropology and child-study. Locke uses, as empirical arguments, travellers' reports about savages, and anybody's observations of childhood. Is this an exclusively introspective psychology? Is this an especially antiquated method of work? To be sure, in the Scottish philosophers you very frequently find, side by side with psychology, a great many investigations which depend upon what some people call introspection, and upon what nobody should call Empirical Psychology. But this other something in the works of such thinkers is Philosophical Reflection. In such works Empirical Psychology and metaphysics are frequently very confusingly blended; but in any case Philosophical Reflection is something very different from the introspective observation of the contents of one's own mind for purposes of natural history. Introspection, in the psychological sense of that word, the relatively exclusive study of the contents of one's own mind for the sake of finding out the laws of this mind, is a process that you find deliberately pursued in a very few of the older works belonging to the literature of our subject. But these works are not text-books of psychology, or independent investigations into the science as such. They are psychological autobiographies, of greater or less value as documents. But in precisely this same sense introspection is present as a notable factor in the literature of to-day. In fact, there is much more autobiographical confession in modern literature than ever there was before. The introspection of St. Augustine has its representatives in the older literature, say, by tens. The introspection of Marie Bashkirtseff has in the newer time slain its thousands. And so much for the Old and the New as regards this aspect of introspection. But if you ask whether the truly scientific psychologist of the present time has wholly abandoned introspection, then every

respectable text-book of recent psychology would show you how little this is the case. In general, modern Experimental Psychology constantly involves the scientific pursuit of introspection under artificial conditions, accompanied indeed by a wide comparison of the reports of various observers.

In brief, then, the second statement often current as to our antithesis is false. The Old Psychology was not exclusively nor even mainly introspective. It was always, according to its light, psycho-physical, social, and comparative. It studied mind and body together, and observed indirectly as many minds as could be got under some sort of scrutiny. On the other hand, the New Psychology does not neglect a proper introspection; but gives to a due comparison of introspectively obtained results an even more prominent place than the introspective ever obtained in the older psychologies.

I have thus dealt with two false statements of the antithesis between the Old and the New psychological methods. Having set aside the false antithesis, it is easier to state in more practically valuable terms the nature of the true answer to our question, What is the New Psychology? Recent psychological study is separated by no chasm from the psychology of the past. It is a pursuit, with vastly improved instruments, and with vastly increased numbers of observers, and with greatly intensified technical training, of the old study of the natural history of mind upon methods and with ideals every one of which the past, according to its light, already in a very genuine sense anticipated. It is the fruit, therefore, of the past, just as it is a stage on the way to a higher future insight into how man's mind behaves, and into what we can best do to manage and to cultivate minds. Very imperfect is our knowledge about all these matters at present. Perfectly worthless would be our knowledge, however, if we had not the whole tradition of our older acquaintance with human nature to draw upon. And every sensible psychologist constantly uses that older tradition, constantly attempts to add to it, and is a New Psychologist merely in so far as he is at present able to use certain special instruments of research which were until recently inaccessible. In the novelty of these special instruments and their use lies what makes our psychology a new psychology.

So much for the situation of the moment. The New Psychology is no mystery, no miracle, no wonder of recent invention. The newer researches have indeed been as fascinating in their details as they have thus far been incomplete as regards their theoretical results. Our em-

pirical knowledge of human nature is still in its infancy. It has always been in its infancy. And so far the Old and the New may indeed lie down together. Our knowledge of human nature is unquestionably growing; but our scientific theories as to the natural history of the human mind have not recently been in any thoroughgoing sense revolutionized. We know a great deal more than Aristotle knew about the psycho-physical problems that Aristotle already began to study; but our theoretical insight into the fundamental laws of mind is still small. Nevertheless, if one considers the worth of special researches, there is indeed a complex, and, in view of the great mass of details which the new instruments of research have recently added, a relatively new empirical psychology. The power of this psychology to give final guidance to the teacher, or to any other practical manager of the mind, is very imperfectly developed. Nevertheless, just because practical workers have constantly to do with details, rather than with theories, this vast collection of manifold details concerning the behavior of mind is full of suggestions that from time to time can prove of very considerable practical importance to the teacher.

III.

This being the general situation, our problem reduces to this: There is a great deal in the newer study of mind which can be, and which ought to be, of practical service to the teacher. But the new science is pursued for its own sake, just as the teacher's art is carried on with reference to the teacher's own interest. The problem is to bring about a wholesome coöperation between pursuits related, but just now too much kept apart. What the teacher constantly desires is to get at the New Psychology, to learn what it means and what it has found out. If the New Psychology were in some perfectly clear and glaring contrast to the Old, some striking revolution of practical methods might be expected to follow from it, and to be capable of definition. But since neither theoretical development nor novelty is as marked a feature of the New Psychology as some hopeful accounts would imply, the teacher in general no sooner approaches the new science than he is baffled by its wealth and by its puzzles; while the New Psychologist no sooner endeavors to guide the teacher than he is obliged to show, by his mysterious manner or by his wonderfully constructed sentences, that what he most desires to impart is still in the main simply unspeakable.

As a fact, I feel that at present the relation between the students of the newer psychology and the teachers of our country is not yet a very

healthy relation. I myself have been for two or three years temporarily the chairman of a "Philosophical Department" in my University. As such I have had to consider the hopes and difficulties of a number of young men entering upon the profession of psychology. I have felt very much concerned about the harassing and painful situation in which some of them are at present put. I have feared sometimes lest the public misunderstandings as to what their profession may do or ought to do for teachers, might in the end result in injury to the success of these ardent investigators. I believe profoundly in the study of that psychology which, in the sense just pointed out, is indeed new, since, without breaking with the past, it is constantly renewing its youth. But one of the missions of the public, whenever it feels a strong need for a good thing, seems to be to do all sorts of deeds to hinder the fulfilment of its own ends, and to confuse those who are trying to help it. I feel, then, disposed to refer to what at the moment is too often the situation in which the young psychologist innocently and painfully finds himself.

The psychological investigators, and especially the younger psychological investigators in our laboratories, are, for one thing, just now in the position common to men who are forced to win a hearing by somewhat magnifying their own office. If Empirical Psychology is not new, the laboratories are new; and they are unquestionably very valuable and admirable means for the advance of the science. Attention, however, has to be attracted to these laboratories. The attention and support of such practical people as the teachers are very valuable for the young psychologist. He, in his turn, is sanguine. He is devoted to his calling. He hopes that whatever interests him can be made to interest everybody; and so he is disposed, if not to make very large promises to teachers, at least to make very considerable calls upon their time and patience. In consequence, the teachers who are under his influence are frequently led to hope that whatever happens in his laboratory may in some way pretty directly contribute to the establishment of sound methods in education, to the saving of souls, or to the answering of all those countless practical questions that seem so frequently, in the average teacher's mind, to demand an immediate solution. Hence the teachers look more or less wonderingly toward the laboratory. And the man in the laboratory is more or less stimulated, and, I fear, sometimes more or less confused, by these calls from another profession. Thus stimulated and thus hopeful, he of course longs to help everybody. Distracted by the external calls for aid upon matters which perhaps do not directly concern him at all, he tends to undertake the solution, not indeed of

everything, but of most of the things that the teachers desire him to solve.

Meanwhile the young psychologist feels that the teachers have countless facts which they might furnish to aid him in his researches. These facts are occurring in the school-room or elsewhere, but so far not in the laboratory. Perhaps the psychologist thinks that these facts can be got indirectly into the laboratory by means of the now well-known syllabus. The syllabus asks questions and furnishes a blank, which the teachers, according to their lights, are to fill out in such wise as to indicate the contents of the minds of their children. But the psychologist in the laboratory cannot well control the scientific use of the syllabus by persons outside of the laboratory. Lacking himself the time for an adequate personal study of children in school-rooms, the laboratory psychologist is consequently too often left dependent on the observations of unskilled persons for far too many of his data. Meanwhile the syllabus, often inexpertly used and filled out, through the busy teacher's aid, may have led to much waste of time in the school-room. It may also tend to produce in the end a feeling of disappointment in the teacher's own mind. Countless so-called facts go on record; but the results are still to wait for. The syllabus comes; but wisdom lingers. The teacher, too, lingers on the shore of psychology; and somehow or other the entire situation begins to get a painfulness of which we have recently heard many echoes.

Or, perhaps, the young psychologist does not use the syllabus. He rather plans to bring his instruments to the school-room, or, on occasion, the school-children to his laboratory. Both undertakings are frequently thoroughly justified. But, in any case, experiments pursued under such conditions are subject to a double criticism. The laboratory psychologist properly desires these experiments for theoretical purposes. The teacher desires them to be of immediate practical significance. It is true that the combination of these two interests has been in some cases notably very easy. But in other cases it may be very difficult. And the psychologist in his laboratory may find it hard to acquire sufficient experience of the school-room and its problems to adjust these conflicts when they arise. He is led to making vast promises. The teachers remain promise-crammed. So far, that is for the time being too often all. As a fact, the young psychologist ought not to be distracted by this demand for immediate practical application. On the other hand, the teachers ought not to be asked to give extra time to contribute to the advance of purely scientific interests. They need to get direct practical benefits. And yet at present these two bodies, whose interests, if related,

are so diverse, ought to be made to coöperate; while the coöperation is still left to the ingenuity and social adroitness of a busy young laboratory man, who has recently obtained his Doctor's degree, who has the whole problem of his career before him, who has to teach college-classes, to interest the public in his science, to contribute papers to the psychological journals, and perhaps to keep up polemic relations with his metaphysical colleagues, at the very moment when the teachers desire him to give them infallible advice, and when he himself is longing to find out something about what goes on in the school-room, as well as in any other place where human nature displays itself.

Now I say that this situation involves altogether too great a demand upon the young psychologist. If he frequently fails wholly to satisfy the demand, if his polemical essays have a somewhat hectic tone, if his promises to the public have a somewhat crude vagueness, the fault is very frequently not his, but the result of the unfortunate situation in which his profession and the public still place him. Now if we do not better this situation, we shall all suffer. And the remedy lies not in trying to ignore the New Psychology, nor merely in telling the teachers that they have nothing to hope from its work. The remedy lies precisely where experience has so often shown that in similar cases the difficulties of too complicated a situation are to be met, namely, in a new division of labor.

IV.

One who attempts to define a relatively new practical office is subject at the present day to the easy criticism that we already have too many officials. It seems indeed unnecessary to create an office until you already have a man for the office. But, in the case of the recommendation that I now propose to make, it seems to me that we already have both the men and the practical need for the office. The situation of the students of the New Psychology is one which needs to obtain relief. The situation of the teachers who desire to get at the New Psychology is one which needs to receive assistance. From both sides comes the call for the official whose office I shall now try to define. Already, in a number of cases, young laboratory psychologists of sufficient skill and energy have actually made the task which I have in mind their principal business. Already, in the case of certain special public institutions, as in schools for defective children, an office substantially identical with the one that I propose has been recognized. What I wish to suggest is, that the recognition and definition of the proposed office should be made systematic,

and that its importance as a means of bringing about a true relation between modern psychology and modern education should be recognized.

I think, then, that the time is ripe for the recognition of a new kind of intermediate scholar and official, whose business it shall be to mediate between the teaching profession and the work of the laboratory psychologist. My practical proposal is that in our large cities, and later in other places, there should appear in the office of the Superintendent of Instruction, a person whom I shall venture to call a Consulting Psychologist. He should be a well-equipped, modern, experimental psychologist, with a thorough University training, with skill as a laboratory investigator, but, after he once accepts his office, with the responsibilities and duties of a decidedly practical man. He should be well versed in what our better institutions have to offer in the way of the general study of the art of education. He should also, if possible, have had some experience as a practical teacher. But he should not, on the other hand, be a professor of pedagogy. He shall not be responsible for teaching psychology to college classes, or to anybody else, excepting so far as the spirit moves him to discuss his science with the teachers of his city. He shall indeed consult, but he shall not be regarded as anybody's final and authoritative official adviser, infallible or otherwise. If possible, he shall never be called "Professor." He shall have no authority over the organization of schools or the determination of school methods. But this shall be his office and his responsibility, namely: To find out, so far as may be, and with a minimum of interference with the ordinary work of any school, whatever it is worth while for the teacher and the trained psychologist together to know concerning the mental states and processes present in the children of the schools of his city. In other words, his official task shall be simply to investigate and report upon those facts concerning the school-children of his city which are at once of psychological character and of practical interest.

Space would of course fail me in this connection to attempt to set forth, with any sort of fulness, what classes of facts answering to this definition may be regarded as already accessible in the school-room, in case the trained psychologist is from time to time present to direct their collection. The recent literature in praise of the virtues and the hopes of the New Psychology has already had a great deal to say about these classes of facts. For instance, at the moment a great deal of discussion is going on concerning the phenomena of fatigue in the school-room, and concerning the influence of fatigue upon the intellectual work of children. The difficulty with all these later investigations of fatigue is, that

they are at present in a stage which forbids the inexpert person to form any independent judgment about the worth of the methods of investigating fatigue, or about the practical results of such investigation. The whole subject is in a transition state. Yet there can be little doubt that work by experts, when practically controlled by the presence and the plans of practical teachers, would rapidly tend to reach results that would be more or less tentatively applicable to educational purposes. The development of the study of fatigue in its practical relation will never be rapid and wholesome unless theoretical students and practical workers coöperate. Nor can one hope for sufficient attention to be given to these investigations on the part of the possible medical inspectors of our schools. The phenomena in question are largely, and in some cases very subtly, psychological. A thorough investigation of them can be hoped for only from those who are primarily interested in mental life as such. One need entertain no exaggerated hopes concerning the revolutionary effect of such study, if one believes, as a matter of plain sense, that much will be gained if the psychologist and the teacher have the opportunity to consult together concerning the accessible facts, and concerning the methods of work as they from time to time develop. Yet no one but a psychologist whose life is principally devoted to consultation with teachers can have at his disposal time sufficient for such useful investigation.

If the phenomena of fatigue thus form one of the general fields of possible investigation, there are other fields that even more obviously and directly both interest the teacher and puzzle the psychologist. Good and bad spelling; the countless sorts of good and bad memory; the mental effects of physical exercise; the psychological relation of manual training to other parts of the school-work; the increase of skill with the use of this or of that method of training in arithmetic or in some other branch of school-work; the phenomena of school excitements, rumors, occasional mutinies, and the like; the psychological relations of various methods of school discipline; the presence and the variety of the psychologically interesting temperamental differences among the school-children,—all these are instances of classes of facts already accessible to expert psychological observation. None of these classes of phenomena is exclusively related to the study of exceptional or morbid children. The matters thus far on our list may be studied more or less statistically and in relation to large numbers of children at once. The interest of all these classes of phenomena, both for the psychologist and the teacher, is easily recognized. Yet there is nobody at present whose

official business it is to study them at once with professional expertness and with a strongly practical interest. Neither by the use of the syllabus, nor through occasional invasions of the school-room by the overworked college teacher of psychology, nor by the equally sporadic visits of medical inspectors, will such facts come to get the sort of examination they need. To interest teachers in such classes of facts, by lecturing about them, is indeed useful in its own place and time. But the teachers are not sufficiently expert in psychology to make successful study of these facts for themselves. In consequence, we are left at present to crude observation or to loose generalization by the practical teachers, on the one hand, and to laboratory investigations or to statistical collections of far too theoretical an interest, on the other. The Consulting Psychologist, working from time to time in the school-room, and engaged along with the teacher in investigating such facts, is the person needed at present to bridge over the gulf which separates the two professions, whose coöperation is now so desirable, but often apparently so hopeless, an ideal.

The term "Consulting Psychologist" at once suggests, however, to many minds the thought of a person specially interested in the more pathological problems of the school-room. And of course I should be disposed to expect that our Consulting Psychologist would indeed be much interested in precisely these problems also. I should merely be unwilling to confine his work, or the prospects of his success, to the field of the study of exceptional phenomena. The psychology of the healthy is in itself more practically important than the psychology of the morbid; and I do not wish my Consulting Psychologist to be conceived merely as a student of the defective and disordered school-children. Nevertheless, it is true that the study of defect and disorder of any grade could be carried on in a useful way by our Consulting Psychologist in connection with the rest of his task. And here he could coöperate with and supplement the work of the medical inspector. Defects of sense-organs might easily attract his attention, when they had escaped the attention of others. Extraordinary forms of naughtiness or of stupidity might yield their secret to him, when the medical man had not had enough time or interest to advise the teacher concerning the nature of the defect. The various sorts of liars who appear at different ages in many schools would frequently be proper persons for the study of the Consulting Psychologist. Obstinacy, eccentricity, or precocity, where they occur, would interest him, and would be a topic for useful consultation between him and the teacher. As our theoretical knowledge of the meaning of such phenomena increases, the Consulting Psychologist would

be responsible for knowing the progress of his science, and for applying it to the schools with which he had to do.

But most important it is, for my present purpose, to insist upon the fact that, at all events in the present state of the science, my Consulting Psychologist, as I conceive him, would be a searcher for facts much more than a director of other people's methods. He would not be an authoritative adviser in any such sense as that in which the medical inspector may be an adviser. The decision as to what has to be done in a given case involves as much the practical experience of the teacher as the scientific wisdom of the psychologist.

The investigations conducted by the Consulting Psychologist would always be subject to the direct criticism of his superintendent, of his School Board, and of the teachers whom he both serves and, within the range of his own skill, enlightens. The false impression now existing, that, if psychology means anything, the psychologist can infallibly direct the teacher, would tend to pass away at the very moment when an intimate relation between the two made each serviceable to the other. My Consulting Psychologist will not say: "Great is Science; and we the prophets of science are verifying this or that theory, and you, the teachers, must wait until we have some day shown you the value of it all." The Consulting Psychologist will cultivate modesty along with his efficiency, and will avoid mystery the more he becomes useful. His daily speech will be plain; and in his "Pedagogical Seminaries," if ever they come to exist, the sentences used will be as straightforward as those now customary among practical workers. He will be directly responsible for pointing out to the practical people with whom he is associated verifiable facts present in their school-rooms, and facts capable of being advantageously used by them and in their art. Such a Consulting Psychologist, relieved from the heavy duty of expounding his science as college teacher, of contributing to its theoretical advances, of converting the public, and of dealing with the theologians all at once—relieved, I say, of these heavy burdens, will be able, by reason of the very limitations of his task, to contribute in the end to what may often prove to be the most general as well as the most practical interests of both teachers and psychologists.

In fine, my Consulting Psychologist will occupy a place that will grow progressively more important, when once progressive young men are given a start in the calling. Collector and reporter of facts about the minds of school-children, he will tend to be a discreet and cautious investigator, because he will work constantly under fire. Expert in his work, and limited as to the field of its application, he will be able to pre-

vent the waste of time now frequently involved in the pursuit of child-study by psychologically inexpert teachers. He will be near enough to control the sort of child-study that it is worth while to pursue in the schools. He can be constantly consulted as to how to make this or that child-study investigation exact. He will venture upon distributing no syllabus, unless he can pretty clearly show to his own superintendent and teachers why their practical needs are furthered by just such an inquiry. On the other hand, he can distinctly represent to the teacher the interests and the dignity of the truly scientific study of psychology.

As to his practical influence, such a student, if he were once appointed, would obtain that in proportion to his strength. But he would lack that infallibility which sometimes seems to hedge the college professor, yes, to hedge him in, until somebody detects that it is only a false infallibility, and until people then, with false reaction, forsake altogether the studies that have disappointed them. As for the actual daily usefulness of the Consulting Psychologist as a person present in the Superintendent's Office, I have been told by a prominent city superintendent of this country, that in his own office a great part of the actual work is, as he expressed it, psychological, since so many of the problems that come to his office are psychological. Once get such a good Consulting Psychologist into the schools of the city, and the superintendent would prize him, the school-children would love his visits, and the teachers, I may say, would constantly, even eagerly, surround him.

Meanwhile he would be in no sense priest or prophet. He would be investigator—investigator of what was practically worth knowing about the minds of children in that city. In his turn, he would constantly be able to pass over contributions to the professional college psychologist in the laboratory. The latter, for his part, would be relieved of the arduous duty of constantly providing milk for all the psychological babes of his community, whatever their calling; while from the work of the Consulting Psychologist the theoretical psychologist would in the end derive numerous and fruitful scientific contributions. The new calling would thus contribute both to the organization of psychological research and to the practical application of such research to the work of the teacher.

While no immediate revolution of methods would follow from the services of the new official, the daily value of properly adapting psychological research to practical needs would be shown to teachers through the person and work of the Consulting Psychologist. And then we should no longer hear this unhappy question concerning the Old or Rational and

the New Psychology, since all, from the least unto the greatest in the teaching profession, would know that the only psychology worthy of the distinctive name of Empirical Psychology is neither old nor new exclusively, and is always both old and new, and is best called Sensible Psychology. It is destined to be as useful to the teacher as his practical skill and tact can make its results.

If one asks whether good young consulting psychologists could even now be obtained, I answer unhesitatingly, Yes. There are, in this country, more than half a dozen universities already well equipped to train such men. If one asks whether the useful Consulting Psychologist would be a very expensive luxury, I answer that he could be obtained easily, according to his age and experience, at from $1,500 a year upward. If one asks whether such a man would have to be a great genius in order to be serviceable, I answer at once, No.

In the present condition of psychology, any really well-trained young man of sense, a graduate of a first-class university-course in his subject, when once at work in the city schools, could show the teachers in six months more about the practical relations of Empirical Psychology and teaching than these teachers will get out of years of those dreary general courses of public lectures on Pedagogical Psychology which they nowadays so pathetically crowd, and so self-sacrificingly support. I speak advisedly, and as a lecturer, when I say this. Many shall run to and fro, and knowledge shall be increased, and of making many lectures there will doubtless be no end. But in this field, as in any other, it is, after all, as everybody knows, work that counts, and not talk. And the work that teachers want done by psychology for them is practical work, from time to time in the school-room, by a trained psychologist, who knows what is doing in his science, and who wants to help the teachers see in their school-room facts worth seeing.

And that is what, as a poor metaphysician, whose practical wits are of course dull, I may venture at the moment to say about a way to bring our rich and progressive educational life into a closer and truer relation to what in a proper sense is to be called the New Study of Psychology.

JOSIAH ROYCE.

GOLD AND OTHER RESOURCES OF THE FAR WEST.

THE Klondyke gold craze strongly reminds us of the tendency of man to rush upon evils that he knows not of, in the consuming desire to secure that which from time immemorial has symbolized prosperity and power. From the day of the search for the Golden Fleece man has been willing to encounter any danger and endure any privation to possess the yellow metal. The stories of '49 even to-day have bewitching charms for the most unromantic, if heard among the wild cañons of the Golden State. The same glamour sheds a warmth upon the scenes of the hopes and fears, the struggles and privations, of the pioneers of Pike's Peak. But, tragic as was the history of the early days of California and Colorado, the tales now told of the wild and reckless rush to the bleak and frozen Northwest after the World's Desire will for many years stir the hearts of Americans.

The fascination of the unknown largely impels men to rush to the desert and to the ice-locked gorges of the Arctic North after gold, while manifesting little or no interest in the treasures at their feet. Americans, in a general way, know that rich deposits of the most precious of all metals are scattered in profusion within the limits of our States; but few have any distinct knowledge as to where those deposits are, nor of their value to us as a nation. A description of these fields of wealth will here be attempted; but, necessarily, it cannot be exhaustive within the limits of a magazine article.

For a century gold has been found and mined at a moderate profit in the primary geological formations of the Appalachian Mountains in North Carolina, Tennessee, Georgia, and Alabama. Many of the mines of Georgia are especially profitable. But the rich gold finds in the Far-Western States, following the discovery of gold in California in 1849, practically began the era of the Golden Age within the limits of the United States. In the north are the rich deposits of the Black Hills of Wyoming and Dakota, and the probably still richer deposits of Helena and other gold-camps of Montana. Upon the extreme northwestern boundaries of the United States lie the regions of the Kootenai and Mt.

Baker, from which come tales of fabulous riches; and, unquestionably, millions of gold will be mined there within the next generation.

In the extreme southwest rich gold-fields are now being developed in Arizona, from Callville on the Colorado River southeasterly to the Mongollon and the White Mountains at the headwaters of the Salt River. In California gold deposits have been found; and thousands of mines are now profitably operated from the Mojave Desert to Mt. Shasta. The so-called Mother Lode, extending from Kern River northward to Feather River, is famous throughout the world as the scene of the labors of the Argonauts of '49, a period never paralleled in the history of gold-mining. That territory produced perhaps more nugget gold than any other portion of the globe; and yet the rich placer mines of California were practically exhausted within ten years after the first gold was discovered by Marshall at Sutter. Nevertheless, the steady production of gold from the deep quartz-mines on the Mother Lode furnishes to-day a large percentage of the metal for the world's supply.

The disasters and disappointments suffered by the pioneers of Pike's Peak are of comparatively recent date; and the scenes where gold was vainly sought are well known and held in romantic remembrance by the thousands of tourists to Colorado Springs and Manitou. The history of the fitful fever of the gold-hunters of Pike's Peak is in many respects one of the most remarkable in the annals of the craze for gold. Thousands of men dug and delved, revelled and starved, with barren results, on the eastern slope of Pike's Peak, while deposits of fabulous wealth rested, unsuspected and unsought, in the ribs of the earth less than fifteen miles away, on the western slope of that grand and beautiful mountain. This wealth remained undisturbed for a quarter of a century, until discovered by accident, after the swarms of miners at Pike's Peak had sought other fields. The new field, Cripple Creek, is now known throughout the world.

While the locations of some of the rich deposits of gold in this country have been only briefly noted, the regions most remarkable in some respects will be described more in detail.

Central City, a few miles northwest of Denver, has been steadily producing gold for twenty-five years; averaging a production of about $500,000 annually. The collapse of silver values at Leadville resulted in the search for gold at that city; and mines of remarkable richness have been found. These mines produce hundreds of thousands of dollars' worth of gold annually, and promise to continue to be rich producers for many years to come. The unparalleled gold discoveries at Cripple Creek fol-

lowed closely upon the finds at Leadville. And since the discoveries at Cripple Creek gold has been found, and many mines are being worked, near Telluride and at other points in Southwestern Colorado.

The stimulus given to gold-prospecting by the discovery of the remarkable deposits in Colorado resulted in finding rich gold and silver deposits at Marysvale, near the centre of Utah, to which point the Rio Grande Western Railroad was speedily extended. The mines at Deep Creek in Utah, near the intersection of the fortieth parallel of latitude and the Nevada State line, were discovered a few years ago. Repeated, but vain, efforts have been made to secure the building of a railroad to that mineral region. Almost due south of Deep Creek, near the thirty-ninth parallel of latitude and immediately west of the Utah State line, is the gold-camp of Osceola, Nevada. Osceola had one of the few exhibits of gold-mining operations at the Chicago Columbian Exposition. Although food and other supplies must be hauled by wagon to Osceola, —a distance of nearly one hundred miles,—and the product of the mines must be returned by the same conveyance to the railroad, yet the mines are so rich that they have been able to bear that excessive charge, and have for years been profitably operated. Only recently a mineral deposit rich in gold was discovered at Detroit, a point almost directly east of Osceola, and distant therefrom about fifty miles. Since the opening of the mines at Detroit, valuable finds have been made within a radius of thirty miles of that camp.

Pioche, in Southeastern Nevada, nearly on the thirty-eighth parallel of latitude and about thirty miles west of the Utah line, is one of the pioneer mining-camps of Nevada. Like the famous Comstock Lode of Virginia City, Pioche has produced gold and silver in almost equal proportions; but the gold alone would pay for operating that old and reliable mine. For more than twenty years a steady stream of gold and silver has poured out of that camp. The richness of its deposit is proved by the single fact that all supplies for the mines have been carried over wagon-roads from the railroad, a distance of about one hundred and twenty-five miles.

From Pioche to Bodie, California, lies one of the most interesting and valuable mineral fields in the world, and yet, strange to say, until four or five years ago, one of the most neglected.

The marvellous wealth of the Bonanza mines of the Comstock Lode at Virginia City has become a household word. But the wealth of the Comstock Lode was not known when the Washoe mania seized men,—a mania probably as marked as any ever known to the mining-world;—

and the memory of the hardships and orgies of those mad days is almost as sacred to old miners as is that of '49. Eureka, a later find, about sixty miles east of Washoe,—or Austin, as it is now called,—has developed better staying qualities than Washoe, owing to the large percentage of gold mixed with the silver. For the same reason many of the mines near Eureka continue to be paying properties.

The overflow of hardy and reckless miners from Washoe spread over every mountain, cañon, and plain of Nevada from Washoe to Pioche. Numerous mines rich in gold and silver were found, and for a time were profitably worked; but unfortunately the gold was so combined with base metals that it could not be separated by the methods known and practised fifteen or twenty years ago. In mining parlance, almost all those ores are "refractory." As a result of the lack of knowledge by the miners of the arts of reducing ores, abandoned shafts and smelters are now to be seen throughout that vast territory,—at Grant Camp, near Freiburg, at Kawich Valley, at Reveille, at San Antonio, at Hot Springs, at Gold Peak, at Marietta, at Columbus, and at Candelara. At all these points, and at many others, were mines assaying from $20 to $50 per ton in gold. As that metal, however, could not be separated from the base ores, all that country was given over for twenty years to desolation and anathemas.

No gold or silver has been found in the valley of the Humboldt; but far north of the Central Pacific Railway some rich deposits have been found during the last few years. The rich ore deposits of Nevada lie almost on a direct line from Pioche to Bodie. It is evident from the facts stated, that a great mother-lode actually exists in Nevada almost similar to the one so famous in California. The former rests upon the slopes of the divide extending from near Sevier Lake in Utah to Mono Lake in California. The waters of that divide run north to the Humboldt Valley and south to the Colorado River, Death Valley, and Owen's Lake. The demolition and denudation of that divide, due to the attrition of water through the ages, have exposed the metal deposits described. The continuous chain of deposits of gold and silver on that great Nevada divide has never, to the knowledge of the writer, been noted. If a systematic exploration of that great east-and-west divide should be made, surprising results would follow.

Both Austin and Eureka are on branch railroads over one hundred miles south of the Central Pacific Railway; and these towns barely touch the boundary of the great metal-belt of Southern Nevada.

Since the discovery of the gold deposits of Leadville and of Cripple

Creek, and with the possession of new methods of treating refractory ores, old miners have renewed operations on the condemned and abandoned Golconda of Nevada, with remarkable results. The ores at Leadville and Cripple Creek are mostly of the same character as those of the abandoned mines in Nevada. But, with the cyanide process now employed, mines assaying from $15 to $25 per ton in gold ore are worked at a profit in the Colorado camps. The discovery of the cyanide process will revolutionize the mining situation in Nevada. The fabulously rich gold deposits at Ferguson, or the Monkey Wrench district, in Southern Nevada, have been found during the last six years. Equally valuable finds have been made within the last four years at a point about one hundred miles west of Hyko. These ores assay from $50 to $40,000 per ton in gold; and every dollar can be easily extracted by the cyanide process.

It will doubtless be asked why those rich mines are not boomed and why the people are not crazed over them. There are several good reasons for this. In the first place free nuggets of gold are not found; second, the average man lacks faith in a territory abandoned fifteen to twenty years ago: he is slow to grasp the fact that "circumstances alter cases." "Once condemned, always condemned," is the dogma of most men in business, as in morals. The third reason is that the fuel for working the mines and the smelters in Southern Nevada is such that Eastern men generally would spurn the idea of investing money in the properties. Fagots of sage- and other brush constitute the bulk of the fuel used at many of those mines. Even that unsatisfactory fuel costs from $5 to $10 per cord. One cord of good wood, such as is used in the East, would make more steam than four cords of the Nevada fuel; and one ton of bituminous coal would perform as much work as two cords of wood.

These facts make it clear that the cost of working mines in Nevada is a serious matter. In brief, it costs, at many mines in Nevada, for such fuel as is within reach, the equivalent of from $50 to $75 per ton for bituminous coal; rating the latter at the average cost of such coal in Utah and Colorado. Most of these mines are from one hundred and fifty to two hundred and fifty miles from any railroad. The cost of transportation for food and supplies would appear appalling to the Eastern coal- and iron-miner. Yet, notwithstanding these facts, many of the mines are worked at enormous profits. With a railroad traversing that territory, however, results would ensue in the output of gold which would startle the world.

The mining territory from Pioche to Candelara thus described is

wholly in Nevada. Just across the Nevada line, west of Aurora, is Bodie. This California town has been one of the most remarkable gold-camps that the world has ever known. It is on the eastern slope of the Sierra Nevada Mountains, at an elevation of 9,000 feet, and has, perhaps, produced as much gold as any one mine in California. Northwest of Bodie, also on the eastern slope of the Sierra Nevadas, are Markleville and other mines, which contain gold and silver in almost equal proportions; but the cost of supplies has, heretofore, prevented any great development of their deposits. On the western slope of the Sierra Nevada Mountains, and almost directly west of Bodie, the heart of the Mother Lode of California is tapped; one of the richest sections of the great lode being in Calaveras County. This county has been and now is one of the greatest producers of gold in California; and the famous Utica mine in the Angel District of that county is, next to the Stanton mine in Cripple Creek, probably the richest single gold-mine in the world.

If a pin be placed at Denver, Colorado, on the map, and another at Stockton, California, and a string be drawn from one to the other, an air line will be marked, passing through the heart of the gold territory described. Slightly to the north of Denver is Central City; and southwest of that city is Cripple Creek; about thirty miles to the north of the string Leadville will be found; in the southwest corner of Colorado will appear Telluride, Rico, and other points where gold is mined; Marysvale in Utah, almost due south of Salt Lake City, will appear to the south of the string; fifty miles to to the north of it, near the line between Utah and Nevada, will appear Osceola; Deep Creek lies north of Osceola and on the southern edge of the great desert west of Salt Lake; Detroit and several other rich gold-camps are almost due east of Osceola; Pioche lies one hundred miles south of the string; and the wonderfully rich gold territory of the Monkey Wrench district lies southwest of Pioche.

Now, north and south of the string will appear dotted on the map of Nevada the gold-camps of Grant, Freiburg, Reveille, Kawich Valley, San Antonio, Gold Peak, Hot Springs, Belleville, Candelara, and numerous others. Almost under the string, in California, we find Bodie, and to the north of it Markleville and other points,—all on the eastern slope of the Sierra Nevada Mountains. On the western slope of the great Sierras the string will be almost on the Utica mine, which is located between San Andreas and Sonora. North and south of the Utica mine are hundreds of rich gold-mines in profitable operation.

The distance from Denver to Stockton is about twelve hundred miles. On no portion of the habitable globe is there a region so continuously and

enormously rich in gold as the territory described; and yet, notwithstanding this fact, the progressive Yankee has scarcely made a start in opening and developing these riches which have been entombed for millions of years, and which will remain so sepulchred until we awaken to an appreciation of the fact that the States of Colorado, Utah, Nevada, and California bear within their bosoms more wealth than ever was dreamed of by Crœsus.

But the mineral wealth of these States is not confined to gold. Ignoring silver, which will continue to be largely mined as a by-product, they contain riches beyond belief. Colorado and Utah have as fine anthracite coal as Pennsylvania can boast of. They have bituminous coal of first quality for coking and other purposes, exhaustless in quantity. They have iron in immense deposits; Utah, especially in the southwest corner, having mountains of almost pure iron, the like of which, for richness and extent of deposit, exists nowhere else. In Nevada, north of Hyko, is Coal Valley,—so named by United States engineers,—where coal of fine quality is said to underlie an extensive territory. Should coal be mined along the line of a railroad traversing that territory, it would be more valuable than the richest gold-mine.

Upon coal and iron all modern industry rests. However rich may be the State of Pennsylvania, owing to its coal and iron, the day will come—and at no distant time—when Colorado, Utah and Nevada, with their gold, silver, coal, and iron, will be the richest territory in the world. But such a wonderful transformation will be possible only when our people shall bend their energies toward opening and developing the resources of these States.

But Colorado, Utah, and Nevada have boundless possibilities of development in addition to their mineral resources. Thirty years ago the writer traversed Southern California; finding it a sage-brush waste, with lands worth, if marketable at all, not more than 50 cents per acre. Los Angeles, the metropolis of Southern California, then contained about 4,000 souls. Seven years ago, a second visit was made to the Land of the Sun; and a third, three years ago. A grand transformation had taken place in the appearance and wealth of California. The utilization of water from the mountain streams had made that waste region the home of the rose, the lily, and luscious fruits. Los Angeles had swelled to 65,000 population by 1890. To-day it has over 80,000; while flourishing villages, towns, and cities dot the valleys where a quarter of a century ago the jack-rabbit reigned supreme.

The development of Colorado and of Utah began years ago; but the

greatest growth has been in the last eight years, owing to the opening up of those States by railroads. Abundance of water exists in Colorado; and of many portions of Utah the same is true. In those States irrigation has produced marvellous results. Vegetables are grown there superior to those produced in almost any other portion of the United States. Corn, equal to the best cultivated in Iowa or Kansas, can be grown in the irrigated valleys. Within a few years past, the annual Apple Festival of Cañon City has become famous throughout the Rocky Mountain regions. In very few portions of California can a good peach be grown; but that fruit, equalling the best grown in Delaware, is produced in abundance in Grand River Valley and in other portions of Colorado: and Utah produces just as good. Southern Utah, too, can produce fine grapes, prunes, other fruits, and cotton.

Nevada is not so well supplied with water as are Utah and Colorado; but the high mountain ranges of the southern portion of that State offer ample encouragement to the seeker of the fruits of the soil. Those mountains are the birthplace of streams, the waters of which, if carefully stored, would irrigate thousands of acres; insuring the production of cotton, grapes, prunes, peaches, apples, pears, and other fruits, as well as grains such as are now grown in Utah and Colorado. All these products would find ready market in the mines, and at high prices.

It will doubtless appear incredible to most readers that a belt of country averaging one hundred miles in width exists in Colorado, Utah, and Nevada, where more of the bounties of nature could be enjoyed, if the country were properly cultivated, than perhaps in any like area on the face of the earth. Yet such is the fact.

Thirty years ago sterile mesas and plains covered Southern California. Railroad transportation and irrigation transformed the sage-brush plains and valleys of California from barren wastes into beautiful and fruitful gardens. The same agencies can produce the same results in Colorado, Utah, and Nevada.

While it is incontestibly true that modern industry rests upon coal and iron, it is equally true that modern commerce, in civilized nations, rests upon cheap inland railroad transportation. For generations the boast of the mighty British Empire has been, "Britannia rules the waves." Until this generation that boast has been a poetic and practical truth of potent meaning to the world. To-day, however, it matters little to the people of America whether Britannia rules the waves or not. The carrier may come, the carrier may go, but the tiller of the soil is to-day the wealth-creator, as he has been from the beginning.

As thirty years ago the Pacific railways reclaimed the boundless wastes west of Omaha and Kansas City from the buffalo and the Indians, so to-day there are regions in Colorado, Utah, and Nevada, as well as in other of our Far-Western States, where railroads would cause almost as startling changes in the advancement of civilization. The truth of this would be apparent, should a railroad be built through Southern Nevada; furnishing coal for mining and other purposes at a cost of from $5 to $6 per ton, as against present expenditures for fuel practically equalling $50 to $75 per ton, as heretofore explained. Such a railroad would reduce the cost of transacting all business throughout that territory to an extent utterly impossible for Eastern people to comprehend.

If prosperity is to return permanently to the people of the United States, we must ever remember that the wonderful growth of our country in material wealth followed closely upon the creation of our great railroad system west of the Missouri River, and that the continued growth of that railroad system is absolutely essential in regions now waste, but rich in coal, iron, copper, silver, and gold, and capable of enormous agricultural development by the introduction of irrigation.

I shall briefly show where one such railroad could be built, insuring the results named. There are two railroads in operation through Colorado from Denver and Colorado Springs, passing through Cripple Creek and Leadville to Grand Junction. The western divisions of these railroads have been completed only a few years; but in that time wonders have been accomplished in the cultivation of the soil, and in opening and working mineral deposits in that section. An extension of our railroad system should be made from Grand Junction to Salina Pass, and thence to the town of Salina; thence to Marysvale; thence to near Cedar City, passing not far from the great iron deposits of Southern Utah; thence to a point south of Pioche; thence to near Hyko, passing Coal Valley; thence south of Reveille; thence to Candelara; thence to the northern shore of Lake Mono; thence westward to within about ten miles of Bodie; thence to Mono Pass; thence down the valley of the Tuolumne River to near the Angel gold regions of Calaveras County, passing the famous Utica mine; and thence to Stockton and San Francisco.

Such a railroad would be about nine hundred miles long. It would cut through immense deposits of bituminous coal east of Salina Pass, would tap the Marysvale gold and silver regions, open the greatest iron deposit on our continent, and would traverse the heart of a territory extending from Pioche to Bodie, known for a quarter of a century to be rich in gold, every ounce of which could be reclaimed by the cyanide

process. That road would traverse the finest scenery in America, *via* Mono Pass. It would swing around the mountains encircling Mono Lake,—one of the most remarkable sheets of water on the globe;—it would present to view the craters of extinct volcanoes unequalled in North America; it would pass within ten miles of Yosemite Valley, which could be reached by tourists with ease over good wagon-roads; it would traverse Hetchy-Ketchy Valley which is almost, if not equally, as grand as the famous Yosemite; and from it would be seen Mt. Dana and Mt. Lyell, two of the grandest snow-capped peaks of the American continent, each summit being over 13,500 feet in altitude.

The Great Northern Railroad is now building a tunnel two and one-half miles long through the Cascade Mountains, to Seattle, to secure light grades. If such a tunnel were built at Mono Pass, it would enable a railroad to cross the great Sierra Nevada divide to the Pacific Slope with less grade than any other railroad reaching the coast. That tunnel would cross the Sierra Nevadas nearly at the elevation of the gold-mines at Bodie; it would cut the gold-bearing rock its entire length in a direct line from Bodie to the Mother Lode; and it would, without doubt, reveal rich gold deposits in its course.

The free gold of the Klondyke region will soon be exhausted, as was the nugget gold of California and Australia. But the exhaustless golden riches in the quartz formation of California, Nevada, Utah, and Colorado can be enjoyed by us for generations after the Klondyke craze shall have become a terrible memory. The boasted South African gold deposits cannot compare with the enormous areas containing gold in our States; extending, as our deposits do, for six hundred miles continuously north and south in California, and for over twelve hundred miles east and west from Stockton, California, to Denver, Colorado. We can work these mines every day in the year, with every necessary and many of the luxuries of life springing from the soil adjacent to the mines. On no portion of the globe can such bounties be enjoyed as in the territory described. But these boundless resources can be made available to the world only by cheap railroad transportation. This is the primal and underlying factor of modern development.

America contains resources capable of supporting hundreds of millions of people. Happy homes can be assured to generations yet unborn where now are desert wastes, if the cultivation of our fields shall have precedence over all our other efforts at development. Then we can open our mines, and control the seas.

It must be clear from the above-mentioned facts, that the enormous

resources of our country can be made susceptible of occupancy only by judicious building of railroads. We must gather the waters from our mountain streams and spread them upon the thirsty and grateful soil of our virgin West; enabling the husbandman to repeat in Colorado, Utah, and Nevada the work begun in California. Wealth will flow from every furrow. When our deposits of precious metals are opened throughout those States, great industrial works will cluster around our coal- and iron-mines; supporting thousands by honest toil.

Capital is timid in enlisting in such enterprises. It is of absolute importance that interdependence and confidence should exist between capital and labor, if our nation is to advance in material growth. It should be the aim of Americans not only to seize and hold a front place in material progress, but to emulate every good work and every high and noble effort of the leading civilized nations. If we adopt this rule of action, labor and capital will meet upon mutually helpful levels; and the capital necessary to enable the people to open and enjoy the riches now buried and useless throughout the great West, will be easily secured. Then the development of our resources will be the most phenomenal in the history of the world; the balance of trade in our favor as against Europe will be unprecedented; our foreign debts will flow home for cancellation; the millions now annually exported for interest will remain with us; in less than two decades our nation will be the overshadowing creditor of the world; and the finances of all the earth will be controlled within the square mile of New York city overlooked by old Trinity.

J. A. LATCHA.

OUR PUBLIC GRAZING-LANDS.

THE "Rocky Mountain News," the well-known daily newspaper of Denver, Colorado, in its issue of September 12, 1894, contained the following "special":

"PARACHUTE, COLO., Sept. 11.—Nearly 4,000 sheep were stampeded by masked cowboys yesterday, and killed by being driven over the perpendicular wall of the Book Cliffs, 1,000 feet, in the canyon of Parachute Creek. Nearly all the sheep-men had left the camp to attend the Peach-Day festival at Grand Junction; and, taking advantage of their absence, the cowboys organized and invaded the camps, driving out the remaining herders at the point of Winchester rifles. Carl Brown, one of the employees, attempted to defend his flock, and was shot in the hip. As soon as the news was brought to Parachute a strong posse, armed with Winchesters, started for the scene. When the posse reached the foot of the cliffs it came upon the carcasses of 3,800 sheep. The sight was most sickening, as the frightful fall had burst them open, and bloody entrails, brains, and shattered bones were scattered in every direction. One of the party remarked grimly, "This is a bigger drop in wool than that caused by the Wilson Bill." The party made its way to the mesa up a steep trail. Here they found Brown, the wounded sheep-man. He was sent to town on a mattress. From lack of proper medical and surgical aid, it is thought that he will die. After resting, the party started out on the trail of the cowboys. A desperate struggle will take place if they are overtaken; for every man on each side is a dead shot, and is not afraid of whizzing bullets. The feeling in Parachute is in favor of the sheep-men, who are residents of the town and have a [moral] claim to the ranges. The loss involved in the killing of the sheep is $10,000; John Miller losing 1,700, and Charlie Brown, an uncle of the man who was shot, 2,100 head. The sheep-men had been forewarned by the cowboys to leave, but had determined to stand their ground. Charlie Brown is the section boss of the Joint Rio Grande and Midland Railroad, and has many friends who swear that before this feud is ended more blood will be shed."

Occurrences similar to the one just described, though familiar to the citizens of the United States who live west of the one hundredth meridian, are apt to cause surprise to a man who has never been west of the Mississippi River, and perhaps to shock one who has never been west of the Hudson. To him such an occurrence appears to be only another illustration of the Western man's reputed disregard for law and the constituted authorities. In reality, it is the inevitable result of a lack of law, for which the Eastern man is fully as responsible as the Western. "Incidents" such as the one above described happen on the public lands,

and are the outcome of the present public-land laws, which Congress has made and which Congress alone can unmake.

Ever since the Homestead Act was passed, in 1862, the agricultural settlement of the public lands has extended rapidly westward; and, as a result, there now remains scarcely any vacant public land east of the one hundredth meridian. West of that line, in the arid and subarid regions, the Homestead Act has proved only a limited success; the extent of its success coinciding with the extent of well-watered land in the vicinity of springs, streams, and lakes. The settler could not support himself on one hundred and sixty acres of arid land; and, in consequence, these lands have remained unsettled. Under the common law, and in the absence of special enactments to the contrary, public lands are commons; and the settlers along the streams at once availed themselves of their commons rights by turning their stock out to graze on the lands in question. So profitable was the result, particularly with cattle, that it was not long before large companies were formed and millions of cattle occupied the vacant lands of the arid regions. The natural grass crop that had previously gone to waste was now transformed into national wealth.

Finally, however, the cattle became so numerous that there was not enough grass to support them properly; and the overgrazing of the arid region began. Then followed a pushing and crowding for grazing-lands, or ranges; the large cattle companies so handling their stock as to destroy the grazing up to the very fences of the small settler, whose milch cow and farm horses were constantly left without pasturage. The settlers, on the other hand, fenced in the springs and streams, so that the cattle belonging to the large companies would die from thirst on the range; while the sheep-owners crowded the cattle-owners by running their sheep on the best range, and grazing an area so closely that cattle had to be removed from the country or starve. The result of all this has been bad feeling, lawlessness, and the destruction of life and property. The history of this period of Western development has not yet been written, because the period itself is not yet closed; but some day we shall have a chapter about it,—a chapter interesting to all, shocking to many, and certainly unique.

In this connection the accompanying table, extracted from the reports of the Division of Statistics, Department of Agriculture, is both interesting and significant.

The table shows that the number of beef cattle in Wyoming attained its maximum in 1886; the total then being 1,280,916. This number

had decreased in 1898 to 688,092,—only a little more than one-half of the maximum. During the same period the number of sheep increased from 520,000 to 1,940,021. To one who is familiar with the condition of the free range these statistics merely show in mathematical form the facts already well known to him from experience; viz., first, that the range has been so overgrazed as seriously to reduce its cattle-supporting capacity; and, second, that sheep—which can find sustenance much more readily than cattle on a closely grazed area, so that they are always successful when competing with cattle on the same ground—are gradually replacing the cattle upon the grazing-lands of Wyoming.

NUMBER AND VALUE OF CATTLE AND SHEEP IN WYOMING, 1883–1898.

YEAR.	CATTLE OTHER THAN MILCH COWS.		SHEEP.	
	Number.	Value.	Number.	Value.
1883	780,000	$18,298,800	520,000	$1,591,200
1884	897,000	23,456,550	598,000	1,303,640
1885	914,940	23,065,637	609,960	1,268,717
1886	1,280,916	32,022,900	518,466	1,072,188
1887	1,255,298	28,815,365	534,020	1,047,480
1888	1,230,192	23,504,663	523,340	1,089,855
1889	1,107,173	21,684,642	565,207	1,187,217
1890	1,217,890	18,240,947	1,017,373	2,249,921
1891	1,096,101	14,766,681	1,119,110	2,521,914
1892	1,107,062	15,910,696	1,141,492	2,808,070
1893	774,943	11,934,118	1,198,567	3,300,255
1894	852,437	11,923,042	1,198,567	2,606,284
1895	767,193	10,562,332	1,222,538	2,004,107
1896	751,849	12,389,717	1,393,693	2,513,944
1897	781,923	13,347,431	1,672,432	3,005,862
1898	688,092	16,390,696	1,940,021	5,714,332

The net loss to the State between 1886 and 1898 in capital invested in beef cattle and sheep is about $11,000,000. If the numerical gains in the sheep industry were to compensate the numerical losses in the cattle industry, on the customary basis of the grazing equivalence of one steer to ten sheep, Wyoming should have at the present time 6,500,000 instead of about 2,000,000 sheep; and should cattle-grazing be entirely wiped out, more than 13,000,000 sheep would be required as an equivalent for the whole grazing industry of 1886. Thirteen million sheep would transform Wyoming into a cloud of dust. Here and there throughout the West are large areas of once fine grazing-land which to-day will not support one steer; for not merely have the grasses been eaten to the ground year after year, but they have been actually killed out and supplanted by other vegetation that stock will not eat. The writer has

traversed mile after mile of such country along the Lower Des Chutes in Oregon. From every part of the arid West rumors of such denudation are heard; and from many sections the reports are reliable and precise. For obvious reasons the local newspapers say little or nothing about the matter; but the fact, that such and such a range is "played out," is a matter of common knowledge in Western communities.

I do not wish, for the mere purpose of supporting an argument, to draw too black a picture of the decadence of Western grazing-lands; but I do wish to assert as strongly as possible my belief, that *if the laws governing our arid lands remain unchanged, lawlessness will continue, the destruction of private property and human life will go on, the prosperity of communities will be lessened, and one of the rich resources of the nation will be wasted.*

It must, however, in fairness be stated that, bad as conditions now are, the remedy is easy, and that, if soon applied, recovery will be quick. If an area of overgrazed land be fenced in, and stock kept off, the grass, if not actually killed, will after a time regain its original vigor,—in some cases in a year or two, in others in five years. Hundreds of instances may be found where a small area of private land, fenced and not overstocked, maintains its full forage-crop; while outside the fence there is practically no grazing whatever. In many places rich stockmen or companies have acquired title, by purchase from homesteaders, of tracts of watered land covering large territories; and, by fencing them in, they have been able to control all the grazing-land of those regions. No other stockmen can bring their cattle on those areas, because they can get no water for them. The resident cattle-owner, therefore, while without legal title to the land outside of his fences, has, *de facto*, the exclusive use of it. He accordingly manages it as if it were his own property, that is, he does not overstock it. As a result, the grass crop is maintained at its highest limit of continued productiveness.

From what has been said with reference to the beneficial influence of private ownership of grazing-lands on the conservation of the natural forage resource, the conclusion might be hastily drawn that the proper remedy for present difficulties would be to transfer the public grazing-lands from Governmental to private ownership. To this course, however, there are two objections—a moral and an economic one.

A farm of one hundred and sixty acres of fertile land in Iowa, devoted exclusively to raising and fattening cattle, will furnish sufficient forage and grain to send to the market a certain number of cattle per year; but in the plains of Eastern Oregon, on the other hand, a much

larger number of acres would be necessary to produce the same number of fat cattle. It is clear, therefore, that the grazing-lands must be disposed of by the Government in much larger blocks than of one hundred and sixty acres, the present maximum limit of a homestead claim. Many live-stock companies and individual cattle-owners are now occupying more than a hundred thousand acres of Government grazing-land each; and they have such vested interests in winter ranches, buildings, corrals, and live stock, that the Government, if it is to transfer its grazing-lands to private ownership, must, in equity, dispose of the lands in blocks of sufficient size to meet the customary requirements of these as well as of other individuals and companies. Or, if the Government, ignoring the equities of such cases, should set an unalterable limit to the size of blocks thus transferable, adjacent blocks would be so handled that they would soon come into the ownership of single individuals or single companies.

Whichever plan might be adopted, enormous tracts of land in the most thinly settled portions of the West would inevitably come into the possession—perpetual and absolute—of a few men. Whatever such a condition might do toward securing able management and cheapening the cost of cattle production, the evils of land monopoly would, to a considerable extent, necessarily follow, or, what is almost as bad, a large majority of the Western people believe that they would follow.

The second and economic objection to the immediate, irrevocable disposal of Government grazing-lands rests upon our lack of knowledge of the real value of those lands. The present classification recognizes only three kinds of public lands—mineral, timber, and agricultural. Before the Government can dispose of grazing-lands, it must determine which portions of the land now lumped as agricultural are really such, and which portions are fit only for grazing. Especially must such areas of arid land as are capable of irrigation, and which, therefore, are really agricultural, be segregated from the areas not capable of irrigation, and be classed as grazing. It is only by the actual application of engineering and hydrographic methods that the exact location and extent of the irrigable portions of the arid lands can be ascertained; and, in the natural course of events, this would require many years. Clearly it would not be to the interest of the Government to grant patents, as grazing-lands, to large areas really irrigable, and worth, therefore, five, or perhaps, twenty times as much. Furthermore, the economic conditions and the trade relations of the West in general have not yet become sufficiently well established to indicate the true value of land. Land

values have been too high at one time or place, and too low at another. It will require at least one or two more decades of successes and failures to show the real money value of our grazing-lands. We do not know whether their present estimated values are too high or too low.

It has more than once been proposed that the Government should cede its lands to the States in which the lands are situated. The principal reason advanced in support of this proposition is, that the public lands pay no taxes and cannot, therefore, be made to bear their proportion of the cost of State administration and improvement; the whole cost thus falling on the private property within the State. Especially is this burden felt in those States in which the area of Government land is still large. During the last decade this proposition of State ownership has been before Congress in various forms. In general, it is favored by the newspapers of the grazing-States, as represented by Wyoming, for example, and is opposed by the newspapers of the agricultural States, particularly the irrigation States, represented by California. In view of the wide-spread distrust among the people of the West of State, as opposed to Federal, management of the public land,—a view strongly evidenced by the antagonism which the proposition of State ownership has met in Congress,—it seems to be extremely doubtful whether any effective action in this direction will ever be taken.

Granting, then, that the Government must for the present retain the ownership of its grazing-lands, the remedy for overgrazing must lie in some plan of limiting the amount of stock to the forage capacity of the area. Before presenting the outlines of a plan intended to accomplish this object, I shall consider briefly another plan which naturally suggests itself, namely, the limitation of the amount of stock by a *per capita* license.

To effect its purpose, a system of licensing must be restrictive, either through the high cost of the license or from a specified limit in the number of licenses granted. If a license sufficiently high to afford adequate protection to the forage crop should be adopted, it would inevitably follow that, under depressions in the market price of the grazing-product, the license system would become, at least in part, prohibitive; so that a portion of the forage-crop would be left to rot on the ground, —a condition of wastefulness quite as objectionable from the standpoint of the general welfare as an equal amount of loss from previous overgrazing. If the other plan should be adopted,—that of limiting the amount for stock licensed on a particular tract; the cost of the license to be nominal,—the difficulties of administration would only

begin; for it is very doubtful whether any satisfactory system could be devised whereby the number of licenses could be equitably apportioned among the various applicants. Furthermore, under a licensing system the interest of the licensee in so handling and moving his stock as to protect the forage-crop from permanent injury would be exceedingly small; for any benefits accruing from such care on his part would, in all probability, be reaped by other men, whose stock would occupy the same area in succeeding years. It is evident, therefore, that for several reasons, a licensing system does not appear very promising.

After a careful consideration of all the conditions, I am convinced that the Grazing-land Problem will be solved more easily by a system of leasing than by any other plan. A leasing system would, from the start, give each lessee a direct interest in the proper management of his tract of land. Having an exclusive right to the grazing privilege, it would be to his advantage to prevent overgrazing, and in other ways to maintain the land in a state of the highest continued productiveness, precisely as if he were the actual owner. A lease could also fix the responsibility for mismanagement, which, under the commons system, cannot be placed upon any one of the many who occupy a particular area. Furthermore, a lease of reasonable duration would encourage minor improvements, such as the securing of watering-places for stock, the building of occasional shelters on the range, and the construction of fences so as to confine the stock to particular areas at certain seasons, —improvements into which, in the absence of a guaranteed tenure of the land, stockmen will put little or no money.

It may not be out of place to mention here that while, to the United States Government, the Grazing-land Problem is an unsolved problem, it is not so to all Governments and all great land-owning organizations. The Government of Australia was confronted by the same problem, and adopted a grazing-lease system. The State of Texas, which owns the public lands within its borders and has its own Land Office, has solved the problem in the same way. The Northern Pacific Railroad, whose grazing-lands had degenerated through overstocking, and were producing no income, has inaugurated a leasing system. It will be seen, therefore, that the grazing-lease system, as a remedy for overstocking, is not altogether theoretical and untried. Indeed, as a matter of fact, it has been found by actual practice to be a satisfactory method of meeting an old difficulty. The real question that presents itself is whether such a system can be applied successfully to the Government grazing-lands; and this involves an inquiry into the conditions of the lease.

In the first place it is clear that the lease should be for a fairly long term—certainly for five, probably for ten, and possibly for twenty or even thirty years. The Australian lease is for twenty-one years or less; and the Northern Pacific lease is commonly either for five or ten years. It is not quite so clear, however, what the annual rental should be. On certain grounds it is questionable whether it should be more than sufficient to pay the cost of administration. The minimum rate in Texas is three cents an acre *per annum:* the Northern Pacific rate averages a little more than two and one-half cents.

At the nominal rate of one cent an acre the income from our grazing-lands, on the basis of Prof. Newell's conservative acreage estimate,[1] would be $3,740,000 *per annum*. It must not be forgotten, however, that, in the leasing of land, the Government may come into competition with other landowners who themselves are leasing their lands; and these owners may very properly demand that the Government shall not seriously underbid them. In case this, or any other consideration, should make it necessary for the Government to charge full market value for its land, say two and one-half cents per acre, an annual income of $9,350,000 would be derived from the grazing-lands, if they were all leased,—a sum amply sufficient to pay the cost of administration and leave a handsome surplus, which latter might be profitably and equitably returned in some form to the States from which it was derived.

The question will doubtless arise in the minds of many Eastern men, "Why should not the Government, as it owns and manages the public grazing-lands, put the profits into its own Treasury, to be used for general purposes?" If he will look further into the matter, however, he will find the following situation: In all the Far-Western States there are large tracts of land still belonging to the Government. According to Newell's statistics,[2] the Government lands in the State of California—the best settled of the Far-Western States—constitute 58 per cent of the total land-area of the State. These lands pay no taxes and, therefore, do not bear their share of the expenses of State administration. In Arizona the Government lands are 76 per cent of the total area; in Montana, 78 per cent; in Utah, 82 per cent; in Wyoming, 86 per cent; in Idaho, 89 per cent; and in Nevada the proportion reaches the astounding total of 95 per cent. This means, roughly speaking, that in the State of Nevada, 5 per cent of the lands, with the improve-

[1] Prof. F. H. Newell, in Sixteenth Ann. Rep. U. S. Geol. Surv., pt. 2, p. 494. 1895.

[2] *Op. cit.*, p. 478.

ments thereon, pay the taxes with which the whole State, including the remaining 95 per cent, is administered.

Many of the Western States have reached the limit of State expenditure authorized under their constitutions, and still are sorely in need of better roads, of more money for schools, particularly for popular agricultural education, and of State moneys for great irrigation enterprises—a matter of paramount importance in some States. It is such considerations as these that have led some of the Western States to ask for the cession of Government lands to them; so that, through sale or lease, they may derive a revenue to be used for internal improvements. It is, therefore, a sound proposition, that, so long as State cession does not seem desirable, at least the income derived by the Government from the rental of its grazing-lands in excess of the cost of administration, should be returned in cash or in the form of public improvements to those regions from which it came.

Now a few words upon Federal, as opposed to State, management of a public-land system,—a matter concerning which the West has often been bitter, and the East always stubborn. The objections to a Federal administration of a grazing-lease system are: That it would be too long-armed, that Washington is too far from the base of operations; that the business would fall into the hands of Government clerks who would not understand the needs of Western communities and the requirements of Western conditions; and that, although in the long run justice would be done, the ranchers would meanwhile be subjected to exasperating and expensive delays,—delays so long and so numerous that the usefulness of the system would be destroyed.

The objection to State cession and consequent State administration is the wide-spread doubt as to a wise handling of the lands by the various States. This doubt exists not alone among students of political economy and recent American history, but among the common people of the West generally; and it is the latter who are likely to be the more influential in deciding the question. Probably the administration of none of the Western public lands has caused more dissatisfaction among the settlers than that of the swamp-lands and the school lands; and these are the very lands which were ceded by the Government to the States, to be disposed of as they themselves should direct.

In the face of such persistent objections on both sides, the legislator is naturally puzzled, and questions whether the problem admits of a satisfactory solution. I believe there is a satisfactory solution; namely, a method which, in result, though not in form, would represent a joint

administration by the State and the Government. The principle was first suggested to me by a rancher of Eastern Oregon, who had formerly been State Surveyor. Important modifications of it were suggested by a San Francisco lawyer, who had had wide experience in land and water-right contests, and by the State Irrigation Engineer of Wyoming. The proposition has finally assumed the following form: Let the Government retain its title to the grazing-lands, but adopt a grazing-lease system. Let the administration for each State be in the hands of a Federal officer, who shall have his headquarters within the State, attend to all leases and other business for that State, and decide all contests. The resident officers to be responsible to a central officer in Washington, who shall have the general supervision and direction of the system, be responsible for its proper management, and have the right to veto, or reverse, the decisions of the resident officers; his office to be retained during good behavior. In each State the income in excess of the cost of administration to be returned to it, to be used for specified purposes of State improvement. By keeping the title of the land vested in the Government, undesirable leases may later be replaced by sound ones. By having a principal officer resident in each State, an administration cognizant of local requirements, and close at hand to deal with controversies and hasten decisions, will be available. And, by having a central Federal officer to devise and maintain a uniform system, with power to annul improper acts on the part of the resident official, provision for a wise administration would be secured.

Space will not permit me to enter into the details concerning other items to be considered in the leases. I shall, therefore, simply mention, in passing, the following: First, provision should be made for the small rancher to enjoy a limited amount of grazing close to his ranch. A prior lease-right, like that recognized and practised by the Northern Pacific Railroad, or a limited grazing privilege within the boundaries of an adjacent leaseholder's area, as provided for in Texas, would accomplish the purpose. Second, the right of homestead entry and of reclamation for irrigation purposes should be reserved to the Government. The holder of a grazing-lease, however, should be compensated to the extent of the loss of his grazing privilege; or, if he should prefer, by receiving, in lieu of his land, an equivalent amount of grazing-land not yet leased, should any such exist. Third, to encourage improvement on lease lands, provision should be made for reimbursing the lessee for fences and other improvements when he surrenders his lease. Fourth, the Government should reserve the right to terminate a lease at any time

in case a lessee should proceed seriously to overgraze, or grossly to mismanage the land in any other way. A matter of paramount importance for the Government to guard against, would be the accumulation of lease-lands by speculators. To avoid this, the leasing-right should be granted only to actual settlers and live-stock owners; limiting the amount of land leased as nearly as possible to the requirements of their stock, with a fair provision for the expansion of business.

This plan of leasing has been pursued by the Northern Pacific Railway with marked success. Through the kindness of an official of the railroad, I have been permitted to examine the terms of the leases in the North Yakima district. The particulars are as follows:

LEASES IN THE NORTH YAKIMA DISTRICT, STATE OF WASHINGTON.

Number of Acres in each Block.	Number of Lessees of such Blocks.	Number of Acres in each Block.	Number of Lessees of such Blocks.
1,000 or less[1]	91	11,000	1
2,000	14	12,000	1
3,000	9	13,000	3
4,000	4	14,000	1
5,000	7	17,000	1
6,000	8	18,000	1
7,000	1	20,000	2
8,000	4	21,000	2
9,000	4	41,000	1
10,000	2		

[1] Actually 950 to 1,049. The same proportion holds for the other thousands.

The result is, that each of the small settlers has his own small range, the cattle-owners are not encroached upon by the sheep-owners, and general satisfaction exists.

The leasing system is not proposed as a permanent system; but it promises to be a satisfactory temporary expedient for protecting our grazing-lands until we discover their real value and how they may be best disposed of. A period of thirty years—the ordinary measure of a generation—ought to settle these questions; and then the nation will be able to determine whether it is best to continue the leasing system, to donate the grazing-lands to the States, or to transfer them directly to private ownership. If, as now seems probable, the third of the plans shall be adopted, data will then be at hand for settling equitable terms of transfer.

FREDERICK V. COVILLE.

THE PLAYS OF ARTHUR WING PINERO.

"RIDENDO castigat mores" might well be the title of this article; for Pinero, like Sheridan, raps the manners of the day over the knuckles—and we of the knuckles like it, and, instead of protesting, laugh.

But, though Pinero may well be called the Sheridan of to-day, he knows that modern life is projected on a larger scale, and appreciates that, while Sheridan could show life reflected in a mirror, the modern dramatist must let his audience view it through a magnifying-glass. This is the reason why many of Pinero's plays of the "Magistrate" and "Cabinet Minister" order, though in their essence comedy, are in their execution farcical; the farcical exploitation being the magnifying-glass through which we view the comedy of modern life as set forth by this playwright.

Pinero possesses, perhaps to a greater degree than any other English dramatist, what is called dramatic technic,—the building up of each detail with reference to every other detail of a play; the development of a story according to a well-defined process of dramatic evolution; and a nice adjustment of dialogue to action. In one of his earlier plays, "The Squire,"—a most charming production which still holds the stage, —Pinero was accused of borrowing from Hardy's "Far from the Madding Crowd." However that may have been, his fine technic saved him from any lasting opprobrium of plagiarism; for his precise dramatic art made "The Squire" less an adaptation than a re-creation.

Pinero, having himself been an actor before he became a playwright, has no illusions regarding the stage and its relations to literature. His own practical experience as an actor has taught him the value of the right word in the right place, as compared with mere fine writing. As he himself has put it, "More dramatic authors have died from literature than from any other cause." But, while avoiding fine writing simply as such, no one has a more brilliant style than he when it becomes necessary to raise a laugh at the foibles of modern society. Every play of his contains quotable sentences. Thus in "The Princess and the Butterfly," the last of his plays presented in America, we have the line, "Those who love deep never grow old," which not only frames a pretty

thought, but also has a direct bearing upon the story of the play, in which a middle-aged hero and heroine, instead of falling in love with each other, become enamoured respectively of a slip of a girl and a mere youth. Clever, too, is the line in which *The Princess* explains why she is thinking of residing in Paris. "Paris," she exclaims, "is a Paradise for middle-aged women!" "Not for the imported ones," comments her friend, *Lady Ringstead*. Another character, in discussing middle age in woman, explains that the surest sign of the approach of that disastrous period in life is "an appetite for dinner in other people's houses." When *The Princess's* young lover, *Edward Oriel*, would brush aside the disparity in their ages, she strikes a deeper chord: "A well-preserved woman is like a harpstring strung to its highest tension. It may respond tunefully to your touch, but the next thing it breaks."

Pinero's ancestors were Portuguese Jews, who settled in London two centuries ago. He himself was educated for the law: but his bent for the stage was too great for him to adopt that profession; and whatever prospects of preferment in it he might have had he gave up for a salary of a pound a week at the Theatre Royal, Edinburgh. This was in 1874. He proved a good actor; and from 1876 to 1882 he played with Irving. His first efforts as a playwright were one-act "curtain-raisers"—among them "Daisy's Escape," which was produced by Irving at the Lyceum, with the author in the cast. His first great success was "The Money Spinner," which Hare produced at the St. James's Theatre in 1880. In 1881 Mr. Pinero followed this play with "The Squire," which was successfully brought out by the Kendals. Mr. Pinero is now forty-three years old. Owing to his experience as an actor, his plays are thoroughly practical; and though he may, consciously or unconsciously, have applied the motto, "Ridendo castigat mores," to his work, his plays are first of all "acting plays." His stagecraft is so good that he gives complete directions in regard to scenery and "business." His manuscripts are more thoroughly "staged" than those of any other modern playwright, excepting Sardou.

He is a slow thinker, but, when he once settles to work, a rapid writer. Therefore, despite the fact that he is somewhat deliberate in getting under way, his plays are so numerous that only to touch upon all of them would exceed the limits of a magazine article. Fortunately two of his well-known plays—both of them have often been given in America—are so different in character, yet so distinctly his own, that an analysis of them will serve to show the scope of his genius. I refer to "The Amazons" and "The Second Mrs. Tanqueray,"—the former a farce

touched with the charm of romance; the latter the most serious and the greatest of his dramas.

In drawing his inspiration from modern life, Pinero has not allowed himself to be flustered by its *embarras de richesse*. He has said:—

"At this moment, the difficulty of the dramatist lies less in paucity of subject than in an almost embarrassing wealth of it. The life around us teems with problems of conduct and character, which may be said almost to cry aloud for dramatic treatment; and the temptation that besets the busy playwright of an uneasy and impatient age is, that, in yielding himself to the allurements of contemporary psychology, he is apt to forget that fancy and romance have also their immortal rights in the drama."

How charmingly the romantic or fanciful can be combined with the comic, Pinero has shown in "The Amazons."

This is a social satire with a gentle strain of the poetical running through it. One seems to see the playwright smiling pleasantly through the lines, as he observes, with an apologetic shrug of the shoulders, "Ridendo castigat mores." From start to finish "The Amazons" is a delicate persiflage on the growing mannishness of the gentler sex; its *denouement* being a homily to the effect, that the "new woman," though new, is yet woman. But, withal, the spirit of romance hovers lightly over the story,—Pinero calls the play a farcical romance;—and one would not be surprised if told that *The Tangle* in *Overcote Park* were an offshoot of the forest of Arden with a modern *Rosalind* and *Orlando* in *Lady Noeline* and *Lord Litterly*. Certainly there is no more clever mingling of romance, comedy, and satire in modern English drama.

The poetic treatment of an amusing story gives "The Amazons" its chief charm. *Miriam, Marchioness of Castlejordan*, bitterly disappointed that no son has been born to her, brings up her three girls as if they were boys. Their attire is mannish,—they wear riding-breeches, sporty gaiters, shooting-jackets, as occasion requires,—and they are taught to box, ride, fish, shoot, in fact all the manly sports, for which *Overcote Park* affords capital opportunity. The neighbors naturally object to their garb, and call *The Marchioness* eccentric. But she meets their objections with the observation that dress is, after all, "a question of environment," and that "the poor African in her solitary row of beads is as discreet as the best-dressed woman in town." In bringing up her girls in this mannish fashion *Lady Castlejordan* is carrying out not only her own wishes, but also those of her dead husband. Not to have a son, was as sore a trial to him as to her.

Of course it is the provoking which always happens in the early

stages of a play. The bringing up of girls as boys does not make them boys; and, in default of *The Marchioness* being the mother of a "complete boy," the title on her husband's death goes to his brother. This brother, a "wizen creature without shoulders," and his wife, "a wisp of a woman with a mouth like a rabbit's," have a son—*Lord Litterly*. *Lady Castlejordan's* anger and jealousy at this state of affairs are such that she is not on speaking-terms with *Lord Litterly's* parents, and has never seen him. To make matters even more provoking to her, this *Lord Litterly* is a fine fellow. He has, as she protests to her friend, *Rev. Roger Minchin*, "carried everything before him at the University—everything!" It is true that *Lord Litterly* "failed even to take a pass degree" at Oxford, so *Mr. Minchin* informs *Lady Castlejordan*. But what is that to her? "Bother his degree! He was first string in the mile and quarter-mile against Cambridge at Queens Club; he got his cricket blue and came within two of making his century at Lord's; and in Rugby football he was the best three-quarter back in the Oxford fifteen that's been known for the last five-and-twenty years." You observe in these lines, the neat little hit at the preponderance of college athletics, which has a twofold dramatic significance—describing *Lord Litterly*, and voicing *Lady Castlejordan's* disappointment.

By this time you probably know that the problem the playwright has set himself is, to marry *Lord Litterly* to one of his mannish cousins. It chances to be *Noeline*. During a visit to London she manages to slip out of the house at night in man's clothes. She wants to "do" London. Result: She is "done" herself. She becomes involved in a scrimmage, through knocking down a man who is about to strike a woman. True to her sex, though brought up as a boy, she faints. Of course a rescuer appears upon the scene; and you have already guessed that he is *Lord Litterly*. Without being aware of the other's identity, he tracks her to *Overcote Park*, into which he surreptitiously effects an entrance. There he finds two friends, *André de Grival* and *Lord Tweenwayes*, lovers of *Noeline's* sisters, *Wilhelmina* and *Thomasin*.

The rest of the play is the most delightful love-making to be found in modern comedy. *The Tangle* in *Overcote Park* becomes a demesne of merriment and romance. The love-making is of three kinds, each kind set forth by the playwright with delicious discrimination, according to the characteristics of each of the three lovers. *Lord Litterly* is a perfect type of a young Anglo-Saxon. Cool, completely master of himself, he meets *Noeline's* assumed severity in a provokingly calm, bantering spirit. *De Grival* is a French foil to *Litterly's* Anglo-Saxon

self-poise. The Frenchman is decidedly a Gallic *Miss Nancy;* yet he is constantly slapping his chest and proclaiming that, although French by birth, he is thoroughly English. Does he not even say "Damitall!" in the smoking-room? Pinero has considerable fun with this young Frenchman, with the result that *De Grival* is one of the best farcical stage types of his race that we have. The playwright has eschewed the old trick of mispronunciation, and other conventional mannerisms of the stage Frenchman. *De Grival's* talk is amusing, chiefly by reason of queer little turns given at the end of his rapid speeches. Take, for instance, his apotheosis of *Wilhelmina:* "Wilhelmina! Ah, you are adorable! You are enchanting! You are perfect! Oh, you are—you are—you are pretty good!"

In *Lord Tweenwayes* ("*Tweeny*") Pinero has held up to ridicule a type of decaying English aristocracy. *Tweeny* and *De Grival* go through a vast amount of manœuvring—hiding, creeping under bushes, and making other extremely uncomfortable strategic moves. A great part of the time *Tweenwayes* is bent double with pains of various kinds. Every pain he in some way traces to the antiquity of his family—the *Fitzbrays.* Once, after writhing in agony and while still rocking to and fro, he explains that in his family "every alternate generation has the cramp bias very clearly defined." "Our cramp," he adds, "has made history. My mother quotes an old distich—

> 'Cold the wind and damp the day,
> Cramp shall seize the true Fitzbray.'"

However, both *De Grival* and *Tweenwayes,* though a bit ridiculous, are good fellows at heart; and, after the audience has extracted a vast sum of harmless amusement from them, it is quite reconciled to their winning *Wilhelmina* and *Thomasin. Lady Castlejordan* having softened toward *Lord Litterly* because he has *Jack's* (her late husband's) eyes and his fine muscular frame, *Lady Noeline* is also happily disposed of; so that when the play ends the three Amazons are nice, sweet, wholesome girls, over heads and ears in love.

The English failed to appreciate the delicate satire and gentle raillery of "The Amazons"; but in this country it has been one of Pinero's most successful plays. There are not many direct appeals to risibility in it; but an undercurrent of humor runs through the whole play, and an almost continuous ripple of amusement—the most genuine tribute to humor—passes over the audience. *Ridendo castigat mores*—but with a magic wand lightly laid over the shoulders of farce and romance.

"The Amazons," though produced before "The Second Mrs. Tanqueray," followed the latter in point of writing. In fact, it was written by Pinero as a relaxation—a charming way of taking a holiday. "The Amazons," in turn, was followed by "The Notorious Mrs. Ebbsmith," a play of the "Tanqueray" order, but not so successful. Indeed, "The Second Mrs. Tanqueray" marks not only the high-water mark of Pinero's art, but the high-water mark of the popular problem-play. After it the question raised concerning plays which dealt with what are usually considered forbidden topics was not regarding the topic dealt with, but as to the comparative skill and freedom from objectionable frankness with which the playwright handled it. "The Second Mrs. Tanqueray" did much to eradicate sophistication in things dramatic. It had, for instance, been deemed advisable in 1888, when Pinero's charming and highly successful play, "Sweet Lavender," was produced in this country, to conceal the fact that the heroine of the play was an illegitimate daughter. But when "Sweet Lavender" was revived after the public had accepted "The Second Mrs. Tanqueray," it was given as written.

When "The Second Mrs. Tanqueray" was produced in London, an English critic thus summed up his tribute to Pinero's genius: "He is not yet forty; and he is the author of 'The Second Mrs. Tanqueray.'" The play is written with amazing technical skill: there is not a line, however reckless in its wit or audacious in its philosophy, which is not interlocked with the story and which does not aid or illumine its development. Dealing in a novel way with an old, yet ever recurring, and always interesting problem,—the woman with a past, and her attempted redemption by a man with a future,—it made a more profound impression than any other modern English play, and placed Pinero in the front rank of modern dramatists. Among recent English plays it has the unusual, perhaps unique, distinction of having been taken into the *repertoire* of a famous foreign actress. For *Paula Tanqueray* has become one of Duse's finest *rôles*.

"The Second Mrs. Tanqueray" is, of course, a problem-play. And, speaking of problem-plays, does it never occur to those who use this new term so glibly that it stands for something dating considerably further back than *anno Ibseni?* Is not "La Dame aux Camellias"—which, absurdly enough, we translate as "Camille"—a problem-play of the frankest possible kind, and almost old enough to be a classic? Have our Decadent friends overlooked this fact because "La Dame aux Camellias" is written with such consummate skill—because it is so interesting? Cannot a problem-play be also a real play? Surely the problem is brought

home with none the less force when handled with astounding technical precision. Nor does the lesson sought to be conveyed fail because the dramatist has built upon it a brilliant and effective play. There is no reason, excepting lack of ability on the playwright's part, why a drama should not deal seriously with a vital social problem without being, in the cant phrase, "too good for the box-office."

Had Pinero desired to place a motto at the head of his play, he could not have chosen a better one than that sad reflection of *Paula Tanqueray's* upon her vain struggle to escape from that past which unrelentingly confronts her. In it she voices the whole tragic import of the play. "The future," she says, "is only the past again, entered through another gate." It is her death-song. For, to close that gate forever against herself, she commits suicide. In "The Second Mrs. Tanqueray," Pinero does not preach a false, alluring philosophy. He wins our sympathy for *Paula*, not by showing that such a woman can escape the consequences of her past, but by employing all the resources of an experienced playwright to prove that she cannot. With Pinero there is no glorification of the unclean. "La Dame aux Camellias," and "The Second Mrs. Tanqueray" are separated by a greater distance than the English Channel. Starting on somewhat similar lines, they are, when the curtain falls, as far apart as the two poles of French and Anglo-Saxon racial philosophy.

"The Second Mrs. Tanqueray" is one of the most compact dramas ever written. There is not a superfluous word in it, not a line nor an episode, nor even a scene, which does not have its exact bearing upon the development of the story. There is no finer example of precise dramatic technic than this play. Yet, as with a great singer or instrumentalist, Pinero's vast technical equipment is but a means to an end. It is employed to keep the main story either in full view or to throw certain side-lights upon it. The play is tragic, with a clever balance of high comedy; the latter accomplished by clever bits of society characterization lightly touched in here and there. Thus it combines the strength of the ancient drama with all the brilliancy of modern exploitation; for even in this story, so sombre in its strain, Pinero has not forgotten the motto of comedy, "Ridendo castigat mores."

Pinero's faculty for putting the story of a play right before us is nowhere more apparent than in "The Second Mrs. Tanqueray." When the play opens, *Aubrey Tanqueray* has invited three intimate friends to dinner at his apartments. He intends telling them of his purpose to marry *Paula*—a woman with a past, with, in fact, several pasts. One

of *Aubrey's* friends, *Cayley Drummle*, arrives with news of the marriage of *Sir George Orreyed*, a weak sprig of the nobility, to a certain, or rather a very uncertain, *Mabel Hervey*.

While *Aubrey* goes to his writing-table to finish a couple of letters, his three friends, still ignorant of the name of his proposed bride, continue discussing *Sir George Orreyed's* escapade. "You may dive into many waters," says *Cayley Drummle*, "but there is *one* social Dead Sea! . . . Why, for years I've been sitting and watching and waiting . . . on the shore of that same sea . . . for some of my best friends *to come up*." This is not merely a bit of philosophy cleverly put: it conveys its exact meaning with reference to the evolution of the dramatic idea. For it brings home to *Aubrey* in the most bitter way the view which the world will take of his marriage.

In fact, whoever reads "The Second Mrs. Tanqueray" critically will find dialogue and action so firmly knitted together that everything said or done has both a direct significance at the moment and a reflex significance at a later stage in the evolution of the story.

Take, as an instance, the scene in the first act, when, after *Aubrey's* friends have left, *Paula*, whom he is to marry next day, comes to his lodgings. Her purpose in visiting him is to give him a last chance to draw back. She brings him a letter in which she has written a list of her liaisons. She frankly tells him that, while there are names in it of which he already knows, it also contains others. For answer he throws the letter into the fire. This action shows the fine strain of chivalry in his nature. But it does more than illuminate the hero's character; for later, as I shall show, it becomes one of the fatal links in the dramatic chain.

Aubrey's life has been lonely. His first wife was cold and unsympathetic. Here is a description of her from *Cayley Drummle*, the wit and philosopher of the play: "He had reckoned, poor wretch, that in the early days of marriage she would thaw. But she didn't. I used to picture him closing his doors and making up the fire in the hope of seeing her features relax. Bless her, the thaw never set in! I believe she kept a thermometer in her stays and always registered ten degrees below zero."

There is a daughter of the first marriage, *Ellean*. She has been brought up in a convent, and is about to take final vows. Her decision has increased *Aubrey's* feeling of loneliness to a point that, although you realize he pities and loves *Paula*, yet you realize still more that the sheer desperation of his lot has much to do with drawing him to her.

Therefore, when, at the end of the first act, he receives a letter from *Ellean*, telling him that she finds her duty to be with him, and that she is ready to take her place by him, you instinctively feel that, had she made her declaration a little sooner, there would have been no second *Mrs. Tanqueray*, or that the second *Mrs. Tanqueray* would at least not have been one of those women who, as Aubrey says chivalrously and with a home thrust at his own sex, "have been roughly treated, and who dare to survive by borrowing a little of our own philosophy."

Poor *Aubrey!* He little recks the task he has set himself in the attempt to "rear a life of happiness, of good repute, on a miserable foundation." He is asking himself a question asked by many an honest, manly soul—"Must there be a different standard of right and wrong for men and women?" To that question there is but one answer; and those who have sought to ignore or evade it are the wrecks that strew the shore of *Cayley Drummle's* social Dead Sea.

In this first act the factors in the problem are clearly set before us—last of all *Ellean*, next to *Paula's* own capricious, emotional, morbid nature, perhaps the most important in hastening the final catastrophe. *Ellean* is a beautiful, pure girl. *Paula* fairly yearns for her love; but *Ellean*, though she knows nothing of *Paula's* history, is not drawn to her. There is something deeply pathetic in this love of *Paula*, with her tainted past, for the spotless girl. *Ellean's* reserve is a thorn in *Paula's* flesh. She is wretchedly jealous of *Aubrey's* affection for his daughter. Her isolation—*Aubrey* has given up his London lodgings for *Highercombe*, a country-place in Surrey—also makes her unhappy and morbid. The country neighbors hold aloof from her. It is true she revenges herself by passing spiteful remarks on them, as when she says of *Mrs. Cortelyon:* "She's six-and-forty; and I wish nothing worse to happen to any woman." She loves *Aubrey*, she appreciates what he did for her in marrying her; but "where's the pride in being a married woman among married women!" She realizes that even after the old neighbors have passed away, "there will still remain the sacred tradition that the dreadful person who lives at the top of the hill is never, under any circumstances, to be called upon." The past! alas, the past! It has crept up even to *Highercombe.*

Paula is made miserably unhappy because *Aubrey* allows *Ellean* to go to Paris with *Mrs. Cortelyon.* She suspects that *Aubrey* wishes *Ellean* to have more wholesome companionship than hers; and, when she accuses him of this, he half confesses that her suspicions are correct.

With these preliminaries in mind, the rest of the story can be

briefly told; for from this point the action fairly gallops along to the edge of the precipice, and over. *Ellean* returns unexpectedly from Paris. She has fallen in love with and become engaged to the hero of England's latest Indian border war, *Captain Ardale*. *Paula's* meeting with *Ardale* is one of the great dramatic moments of the play. *Ellean* has spoken of him to her only by his first name. When they meet, *Paula* is face to face with one of her old lovers—one of the men whom *Aubrey* did not know of, but whose name was in the letter he so chivalrously burned.

This is the climax of the third act. That of the fourth and last is the scene between *Ellean* and *Paula*, when *Ellean*, her love wrecked by *Paula's* past, turns upon her and scourges her by telling her she has always known what she was. "Who told you?" *Paula* demands fiercely. "Nobody but yourself," is *Ellean's* answer. "From the first moment I saw you I knew you were altogether unlike the good women I'd left; directly I saw you I knew what my father had done."

Poor *Paula!* She has been an honest wife. Within the limitations of her nature she has done her best. But whichsoever way she turns, there is her past. "The future is only the past again, entered through another gate." And so she locks that gate with her own death.

Pinero's latest play, "Trelawney of the Wells," which has been produced in London, but has not yet been presented in America, has for its heroine an actress, *Rose Trelawney*. Becoming engaged to a young nobleman, she leaves the Sadler's Wells company and goes to his home to visit. There she becomes so weary of the formalities of aristocratic society that she longs again for the freedom of professional life, breaks her engagement, and returns to the stage. In order to win her back, her lover becomes an actor, and finally succeeds in his purpose.

The play is lightly and brilliantly written. One can well imagine the social satire to which Pinero has given vent in depicting the emptiness of the life of which *Rose* grows so weary in her lover's home. Thus in this, his latest play, Pinero has again given free rein to the motto of comedy, "Ridendo castigat mores."

That Pinero considers his mission a serious one, may be judged from his words. "I believe," he says, "that the playwright's finest task is that of giving back to the multitude their own thoughts and conceptions illuminated, enlarged, and, if needful, purged, perfected, transfigured."

GUSTAV KOBBÉ.